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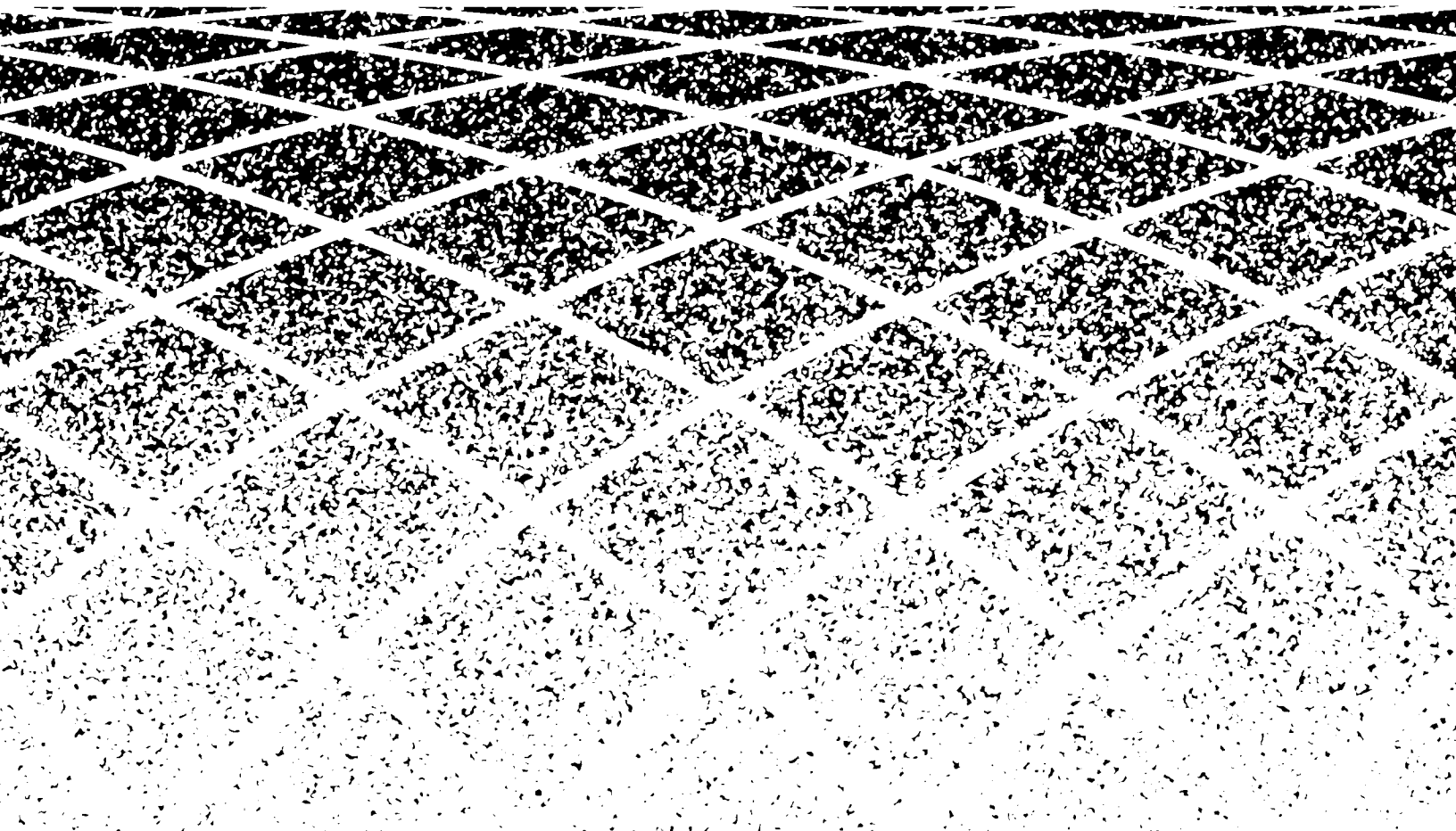
Service Circuit System (SCS) Growth/Degrowth

4ESS™ Switch



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PREFACE

How to Use This Document

Detailed instructions on how to use this document are provided on procedure TNG-893 located in the back of this document.

Application

This document provides step-by-step instructions for the following tasks:

- Bringing a newly installed Service Circuit System (SCS) into the live network for the purpose of Mass Announcement Storage (MAS) replacement and final handling announcements.
- Degrowing an SCS for controller unit replacement.
- Growing an SCS after controller unit replacement.
- Degrowing an SCS complex or Service Circuit Unit (SCU).
- Updating SCS system files.
- Adding SCUs.
- Increasing Disk Pair Capacity for SCU 0-15.
- Adding an SCU Cabinet (SCUC).
- Adding the ASM-Plus Controller and Administrator.

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Acceptance

Acceptance tests are not required for verification of the growth procedures contained in this volume. The readiness of a frame or unit to become a part of the operating system is established by the successful completion of the particular growth procedure in its entirety.

Add Service Circuit System (SCS) with Service Circuit Units (SCUs)

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
	4ESS*™ *SWITCH OFFICE PRELIMINARY CHECK ***Note:*** A simplified block diagram of the Service Circuit System (SCS) is shown in Figure 1 at the end of this NTP.		
1	Ensure that the *4ESS* switch is currently running the 4E19 R1 Generic or later.	Telco	—
2	Ensure that within the last 24 hours the Processor has not experienced any TTY terminal suspends, bootstraps, diagnostic failures, or overloads.	Telco	—

3	Ensure that the AT&T 3B20 Attached Processor System (APS), the Attached Processor Interfaces (APIs), and the 1B Processor are in the duplex mode, and that the 3B Control Units (CUs) are in ACTIVE-STANDBY mode. Routine Exercise (REX) should be disabled, and should remain disabled during the entire growth process. This is accomplished by entering the following at the 1B Maintenance (MTC) terminal:
	
	1. **INH:MACLI,CLASS MTCE;REX!**
	
	Response: `MACLI,CLASS MTCE INHIBITED`
	`AUTOMATIC JOB SCHEDULING`
	`DISALLOWED`
	
	2. **STOP:TEST;PUSYS!**
	
	Response: `OK`
		Telco	—

4	Ensure that diagnostics on the duplexed 3B CUs have been run to completion within the last 24 hours.	Telco	—
5	Ensure that all processor and/or system problems have been cleared.	Telco	—

DO THE ITEMS BELOW IN THE ORDER LISTED			**FOR DETAILS, GO TO**
6	If this is the **first installation of SCS hardware** in this *4ESS* switch office, perform the following two steps: 1. Apply any SCS Broadcast Warning Messages (BWMs) compatible with SCS growth hardware prior to beginning growth. (The BWMs will supply all necessary information concerning required compatible hardware). This will ensure the use of the latest software available which is compatible with the hardware being installed. Coordinated changes to software and hardware may follow at a later time. 2. Ensure that no Software Updates (SUs)/BWMs for SCS system files are applied during SCS growth. If this SCS growth is taking place in a *4ESS* switch **office containing operational SCS hardware**, ensure that no SUs/BWMs for SCS system files are applied during SCS growth.	Telco	—
7	Ensure that the ASM-Plus/SCS Local Area Network (LAN) connection is present and active, if applicable.	Telco	—
8	Ensure that an Extended Polling Peripheral Unit Bus (PUB) Branch is available for SCS growth.	Telco/Inst	—
9	Check office records/Telephone Equipment Order (TEO) to confirm the following for each growth SCU/disk pair: • Type of Service Circuit (000-111) • Disk Capacity (0-3) • Announcement Set (A-Z) • Optional MSP Circuit Pack (1, 2, and/or 3) Retain this information for future use in this procedure.	Telco/Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED		FOR DETAILS, GO TO	
10	Verify the SCS Unit Type (UT) Translator and compare the SCU Subunit Data for each growth SCU against TEO/office records/requirements (PTAGS). Also compare each growth SCU to Breakage TSI Port assignment against office wiring records. Similarly, check that all translation information matches the growth SCU's hardware. ***Note:*** The SCU Subunit Data and the associated Breakage TSI Port assignments are contained in the three words specified by the SCS UT Translator for each SCU.	Telco/Inst	DLP-512
11	Verify the associated Breakage TSI UT Translator(s) and compare the assignment/equipage of the TSI Port to each growth SCU against office wiring records (PTAGS).	Telco/Inst	DLP-516
12	Ensure that diagnostics on the associated Breakage Time Slot Interchange (TSI) Frames have been run to completion within the last 24 hours.	Telco	—
	CIRCUIT PACK INSTALLATION		
13	If the circuit packs for the growth SCU(s) and associated disk pair(s) are not present, continue to Step 14. If circuit packs are present, continue to Step 17.	Inst	—
14	Install growth SCU circuit packs.	Inst	—
15	Install Hard Disk Unit (HDU) circuit packs associated with growth SCU(s).	Inst	—
16	Verify that fuses are installed in the Fuse and Filter Unit for each growth SCU and associated disk pair(s). (See the labeling on the fuse panel cover for fuse locations and sizes.)	Inst	—
	4ESS SWITCH TO SERVICE CIRCUIT SYSTEM PRELIMINARY INTERCONNECT		
17	Ensure that the SCS frame has been bolted down and the SCS power controller connections from the dedicated *4ESS* switch Power Distribution Frame are completed and tested.	Inst	—
18	Ensure that all Scan Point, Signal Distributor (SD) Point, Maintenance Access (MA) Pulse Point, and Emergency Cutoff (EC) Pulse Point connections from the SCS complex to the *4ESS* switch Signal Processor (SP) are completed.	Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
19	Ensure that the SCS Alarm connection to the *4ESS* switch Power Alarm Grid is completed.	Inst	—
20	Ensure that the SCS TTY A, TTY B, and Telephone Jack connections to the *4ESS* switch are completed.	Inst	—
21	Ensure that the DS-120 cables from the growth SCUs to the associated Breakage TSI ports have been set in place but not connected.	Inst	—
22	Ensure that K-Code jumper plugs for both Controller 0 and Controller 1 are properly installed for the growth member number.	Inst	DLP-518
23	Ensure that the Extended Bus cable from the Optical Cross-Connect Panel (OCCP) to the backplane of the KCN4 circuit pack of each growth SCU has been installed. Non-growth SCUs should have Fiber Shorting Contacts (CC# 846832087) in place at the OCCP. ***Note:*** The OCCP has two rows of SCU connectors with 8 SCU connectors in each row. The bottom row of connectors is for SCUs 0-7 and the top row of connectors is for SCUs 8-15. If a whole row of 8 SCU connectors is not being grown, fiber shorting contacts are not required for that row.	Inst	—
24	Ensure that the Local Area Network (LAN) cabling is complete. The LAN cable is daisy-chained between all SCUs (horizontal location 024 on the backplane) on the growth frame and terminated at both ends.	Inst	—
25	Ensure that the DS-120 looping cables and associated straps (pins 023 to 024) are **not** present on any of the growth SCU backplanes at the TN1588 circuit pack locations.	Inst	—
26	If an Office-dependent Alarm (OA) is associated with the growth SCS complex, update its ASCII text in accordance with local practice.	Telco/Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
	SCS LAN CONSIDERATIONS ***Note:*** If no ASM-Plus is present, go to Step 32. If the ASM-Plus is present and active, ensure that the ASM-Plus to SCS Local Area Network (LAN) connection has been completed by performing Steps 27 through 31. ***Caution: All preparations for this section, such as acquiring LAN cables/terminators, should be completed prior inhibiting the LAN. The LAN should not stay inhibited for long periods of time.***		
27	Inhibit the LAN by entering the following input message at the 1B MTC terminal: **INH:SCS 0,LAN!** Response: The screen returns `Code 091` followed by `INH:SCS 0, LAN`	Telco/Inst	—
28	Re-route the LAN cable to add the growth SCS complex to the SCS/ASM-Plus series LAN connection. This daisy-chain connection exists between all SCS complexes and the ASM-Plus. **If adding an SCS complex to the end of a lineup**, remove the LAN terminator at the end of the last SCS complex. Then, extend the LAN cable to include the growth SCS complex, and insert the LAN terminator at the end of the growth SCS complex. **If inserting an SCS complex into a lineup**, interrupt the LAN cable between existing SCS complexes, and insert the growth SCS complex in between two existing SCS complexes.	Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
	LAN CONTINUITY CHECK ***Note:*** For proper LAN functionality there must be continuity between the LAN Terminator at the ASM-Plus and the LAN Terminator located at the highest member number SCS complex (all other complexes being in between).		
29	At the 1B MTC terminal, enter: **DGN:SCS** *x*,**SCU** *y*:**PH 10!** where *x* = First existing LAN-connected SCS Member Number (0-7) (which contains SCU *y*) *y* = Lowest number SCU (0-15) connected to the LAN Response: `RMV SCS x SCU y COMPL,` `DGN SCS x SCS y COMPL ATP` ***Note:*** This diagnostic phase checks LAN continuity for all SCS complexes. If Phase 10 diagnostics fail, appropriate action should be taken to find the "open" in the daisy-chained LAN.	Telco/Inst	—
30	At the 1B MTC terminal, restore the SCU by entering: **RST:SCS** *x*,**SCU** *y*! where *x* = First LAN-connected SCS Member Number (0-7) (which contains SCU *y*) *y* = Lowest numbered SCU (0-15) connected to LAN Response: `ATP` `ANN UPD STARTED` (if ASM-Plus is present and active) `RST:SCSx, SCUy COMPL`	Telco/Inst	—
31	Enable the LAN by entering the following messages at the 1B MTC terminal: **ALW:SCS 0,LAN!** Response: The screen returns `Code 091` followed by `ALW:SCS 0,LAN`	Telco/Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
	SERVICE CIRCUIT SYSTEM GROWTH		
32	Power-up the growth SCS cabinets. 1. At IPUB 0 and 1, press the **ON** button to power the Integrated Power Controller (IPC) TN1671 circuit pack. 2. At SCC 0 and 1, press the **ON** button to power the Master Power Controller (MPC) TN1984 circuit pack. 3. At all growth Hard Drive Units, press the **ON** button to power the Disk Power Controller (DPC) UN356 circuit pack. ***Note:*** Wait at least 60 seconds before proceeding with the next step. This allows the disk drives to spin up to operational speed. 4. At all growth SCUs, press the **ON** button to power the Master Power Controller (MPC) TN1984 circuit pack.	Inst	—
33	Recent change SCS member equipage from UNEQ to GROW using RC form 700.	Telco	DLP-500
34	This is a **Safe Stop Point**. If stopping, perform Steps 35 and 36. Otherwise go to Step 38.	Telco/Inst	—
35	At the 1B MTC terminal, allow REX by entering: **ALW:MACLI,CLASS MTCE!** Response: `AUTOMATIC JOB SCHEDULING RESUMED`	Telco	—
36	Stop procedure for now. Resume at Step 37 when continuing.	Telco/Inst	—
37	Perform Steps 2 through 8 of this procedure. Then continue to the next step.	Telco/Inst	—
38	Extend or insert PUB per TOP 234-353-045. After connecting the SCS cabinet to the Extended Polling Peripheral Unit Bus (PUB) Branch, continue with the next step.	Telco/Inst	—
39	This is a **Safe Stop Point**. If stopping, perform Steps 40 and 41. Otherwise go to Step 43.	Telco/Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
40	At the 1B MTC terminal, allow REX by entering: **ALW:MACLI,CLASS MTCE!** Response: `AUTOMATIC JOB SCHEDULING RESUMED`	Telco	—
41	Stop procedure for now. Resume at Step 42 when continuing.	Telco/Inst	—
42	Perform Steps 2 through 7 of this procedure. Then continue to the next step.	Telco/Inst	—

43	At the 1B Maintenance (MTC) terminal, remove PUB 0 from service by entering:
	RMV:PUB 0!
	Response:
	`PF`
	`RMV:PUB 0 COMPL`
		Telco	—

44	Ensure that power is applied to growth SCS IPUB 0 and Controllers 0 and 1.	Inst	—
45	Power-down IPUB 1 by simultaneously pressing the **OFF** and **MOR** buttons on the Integrated Power Controller (IPC) TN1671 circuit pack at IPUB 1.	Inst	—
46	At the 1B MTC terminal, diagnose SCS Controller 0, Phases 1 and 2, using PUB 0, by entering: **DGN:SCS *x*,CONTR 0:PUB 0,PH 1-2!** where *x* = Member Number (0-7) Response: The screen returns an output message with `CATP`. Bits **1** and **11** should be **set** in the CATP **reason word** indicating that PUB 1 is out of service and the PUB is not duplex. This is the only allowable exception (no other bits in the CATP reason word should be set).	Telco/Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
47	At the 1B MTC terminal, diagnose SCS Controller 1, Phases 1 and 2, using PUB 0, by entering: **DGN:SCS *x*,CONTR 1:PUB 0,PH 1-2!** where *x* = Member Number (0-7) Response: The screen returns an output message with CATP. Bits **1** and **11** should be **set** in the CATP **reason word** indicating that PUB 1 is out of service and the PUB is not duplex. This is the only allowable exception (no other bits in the CATP reason word should be set).	Telco/Inst	—
48	At the 1B MTC terminal, diagnose SCS Controller 0, Phases 1 through 9, using PUB 0, by entering: **DGN:SCS *x*,CONTR 0:PUB 0,PH 1-9!** where *x* = Member Number (0-7) Response: The screen returns an output message with CATP. Bits **1** and **11** should be **set** in the CATP **reason word** indicating that PUB 1 is out of service and the PUB is not duplex. This is the only allowable exception (no other bits in the CATP reason word should be set).	Telco/Inst	—
49	At the 1B MTC terminal, diagnose SCS Controller 1, Phases 1 through 9, using PUB 0, by entering: **DGN:SCS *x*,CONTR 1:PUB 0,PH 1-9!** where *x* = Member Number (0-7) Response: The screen returns an output message with CATP. Bits **1** and **11** should be **set** in the CATP **reason word** indicating that PUB 1 is out of service and the PUB is not duplex. This is the only allowable exception (no other bits in the CATP reason word should be set).	Telco/Inst	—
50	Remove power from SCS IPUB 0.	Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
51	At the 1B MTC terminal, restore PUB 0 to service by entering: **RST:PUB 0!** Response: PF RST:PUB 0 COMPL	Telco/Inst	—
52	At the 1B MTC terminal, remove PUB 1 from service by entering: **RMV:PUB 1!** Response: PF RMV:PUB 1 COMPL	Telco	—
53	Apply power to SCS IPUB 1.	Inst	—
54	At the 1B MTC terminal, diagnose SCS Controller 0, Phases 1 and 2, using PUB 1, by entering: **DGN:SCS *x*,CONTR 0:PUB 1,PH 1-2!** where *x* = Member Number (0-7) Response: The screen returns an output message with CATP. Bits **0** and **11** should be **set** in the CATP **reason word** indicating that PUB 0 is out of service and the PUB is not duplex. This is the only allowable exception (no other bits in the CATP reason word should be set).	Telco/Inst	—
55	At the 1B MTC terminal, diagnose SCS Controller 1, Phases 1 and 2, using PUB 1, by entering: **DGN:SCS *x*,CONTR 1:PUB 1,PH 1-2!** where *x* = Member Number (0-7) Response: The screen returns an output message with CATP. Bits **0** and **11** should be **set** in the CATP **reason word** indicating that PUB 0 is out of service and the PUB is not duplex. This is the only allowable exception (no other bits in the CATP reason word should be set).	Telco/Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
56	At the 1B MTC terminal, diagnose SCS Controller 0, Phases 1 through 9, using PUB 1, by entering: **DGN:SCS** *x*,**CONTR 0:PUB 1,PH 1-9!** where *x* = Member Number (0-7) Response: The screen returns an output message with CATP. Bits **0** and **11** should be **set** in the CATP **reason word** indicating that PUB 0 is out of service and the PUB is not duplex. This is the only allowable exception (no other bits in the CATP reason word should be set).	Telco/Inst	—
57	At the 1B MTC terminal, diagnose SCS Controller 1, Phases 1 through 9, using PUB 1, by entering: **DGN:SCS** *x*,**CONTR 1:PUB 1,PH 1-9!** where *x* = Member Number (0-7) Response: The screen returns an output message with CATP. Bits **0** and **11** should be **set** in the CATP **reason word** indicating that PUB 0 is out of service and the PUB is not duplex. This is the only allowable exception (no other bits in the CATP reason word should be set).	Telco/Inst	—
58	At the 1B MTC terminal, restore PUB 1 to service by entering: **RST:PUB 1!** Response: PF RST:PUB 1 COMPL	Telco/Inst	—
59	Apply power to SCS IPUB 0. Response: REPT: SCS 0, IPUB 0 GROWTH UNIT PCS TRANSITION	Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
60	At the 1B MTC terminal, diagnose SCS Controller 0, Phases 1 through 9, by entering: **DGN:SCS** *x***,CONTR 0:PH 1-9!** where *x* = Member Number (0-7) Response: The screen returns output messages with ATP for each requested phase.	Telco/Inst	—
61	At the 1B MTC terminal, diagnose SCS Controller 1, Phases 1 through 9, by entering: **DGN:SCS** *x***,CONTR 1:PH 1-9!** where *x* = Member Number (0-7) Response: The screen returns output messages with ATP for each requested phase.	Telco/Inst	—
62	Recent change SCS member equipage from GROW to SGRO using RC form 700.	Telco	DLP-501
63	At the 1B MTC terminal, diagnose SCS Controller 0, Phases 1 through 9, by entering: **DGN:SCS** *x***,CONTR 0:PH 1-9!** where *x* = Member Number (0-7) Response: The screen returns output messages with ATP for each requested phase.	Telco/Inst	—
64	At the 1B MTC terminal, diagnose SCS Controller 1, Phases 1 through 9, by entering: **DGN:SCS** *x***,CONTR 1:PH 1-9!** where *x* = Member Number (0-7) Response: The screen returns output messages with ATP for each requested phase.	Telco/Inst	—
65	This is a **Safe Stop Point**. If stopping, perform Steps 66 and 67. Otherwise go to Step 69.	Telco/Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
66	At the 1B MTC terminal, allow REX by entering: **ALW:MACLI,CLASS MTCE!** Response: `AUTOMATIC JOB SCHEDULING RESUMED`	Telco	—
67	Stop procedure for now. Resume at Step 68 when continuing.	Telco/Inst	—
68	Perform Steps 2 through 7 of this procedure. Then continue to the next step.	Telco/Inst	—
	SCS-RELATED TSI GROWTH		
69	Recent change and verify all connecting breakage TSI submember equipage from UNEQ to GROW using RC form 700.	Telco	DLP-506
70	Recent change and verify all connecting breakage TSI submember equipage from GROW to SGRO using RC form 700.	Telco	DLP-507
71	This is a **Safe Stop Point**. If stopping, perform Steps 72 and 73. Otherwise go to Step 75, being sure to read the heading and note above Step 75.	Telco/Inst	—
72	At the 1B MTC terminal, allow REX by entering: **ALW:MACLI,CLASS MTCE!** Response: `AUTOMATIC JOB SCHEDULING RESUMED`	Telco	—
73	Stop procedure for now. Resume at Step 74 when continuing.	Telco/Inst	—
74	Perform Steps 2 through 7 of this procedure. Then continue to the next step.	Telco/Inst	—
	SCU/DISK PAIR GROWTH ***Note:*** In Steps 77 and 80, the SCU diagnostics must be run twice in order to utilize both Controller 0 and 1.		
75	Recent change and verify each growth SCU Equipage from UNEQ to GROW using RC form 700.	Telco	DLP-502
76	Recent change and verify each associated disk pair and MSP equipage from UNEQ to GROW using RC form 703.	Telco	DLP-503

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
77	At the 1B MTC terminal, diagnose each growth SCU and associated disk pair twice (consecutively) using Phases 1 through 7 by entering: **DGN:SCS** *x*,**SCU z:PH 1-7!** where *x* = Member Number (0-7) *z* = Submember Number (0-15) Response: The screen returns output messages with ATP for each requested phase.	Telco/Inst	—
78	Recent change and verify each growth SCU equipage from GROW to SGRO using RC form 700.	Telco	DLP-504
79	Recent change and verify each associated disk pair and MSP equipage from GROW to SGRO using RC form 703.	Telco	DLP-505
80	At the 1B MTC terminal, diagnose each growth SCU and associated disk pair twice (consecutively) using Phases 1 through 7 by entering: **DGN:SCS** *x*,**SCU** *z*:**PH 1-7!** where *x* = Member Number (0-7) *z* = Submember Number (0-15) Response: The screen returns output messages with ATP for each requested phase.	Telco/Inst	—
81	At the 1B MTC terminal, diagnose SCS Controller 0 by entering: **DGN:SCS** *x*,**CONTR 0!** where *x* = Member Number (0-7) Response: The screen returns an output message with CATP. Bit **4** should be **set** in the CATP **reason word** indicating that the mate unit is out of service. This is the only allowable exception (no other bits in the CATP reason word should be set).	Telco/Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED		FOR DETAILS, GO TO	
82	At the 1B MTC terminal, diagnose SCS Controller 1 by entering: **DGN:SCS *x*,CONTR 1!** where *x* = Member Number (0-7) Response: The screen returns an output message with CATP. Bit **4** should be **set** in the CATP **reason word** indicating that the mate unit is out of service. This is the only allowable exception (no other bits in the CATP reason word should be set).	Telco/Inst	—
83	This is a **Safe Stop Point**. If stopping, perform Steps 84 and 85. Otherwise go to Step 87, being sure to read the heading and note before Step 87.	Telco/Inst	—
84	At the 1B MTC terminal, allow REX by entering: **ALW:MACLI,CLASS MTCE!** Response: AUTOMATIC JOB SCHEDULING RESUMED	Telco	—
85	Stop procedure for now. Resume at Step 86 when continuing.	Telco/Inst	—
86	Perform Steps 2 through 7 of this procedure. Then continue to the next step.	Telco/Inst	—
	DOWNLOADING OF SCS SYSTEM FILES FROM THE ATTACHED PROCESSOR SYSTEM (APS) ***Note:*** The downloading of the SCS system files is accomplished via the COPY command. This command is used once for each of the SCS System File Types: TONES, SCCSFT, SCUOPR, SCUDGN, MSPROV, and MSPFIX. These files reside in the /scs directory of the 3B20D computer and may have up to four vintages of files labeled 0-3. Both a Source Version Number (SVN) (the correct and up-to-date file location on the 3B20D computer disk) and a Destination Version Number (DVN) (the next location on each Disk Pair 0) are needed for each COPY command. These numbers ensure that a particular SCS file type is read from and written to the proper disk location.		

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
87	If the *4ESS* switch office **already has an in-service SCS complex**, go to Step 88. If the *4ESS* switch office **does NOT already have an in-service SCS complex**, go to Step 90.	Telco/Inst	—
88	Determine the latest SCS system file version numbers from translations for in-service SCUs.	Telco/Inst	DLP-545
89	Copy the correct and up-to-date SCS system files from the APS to all growth disk pair 0. Then go to Step 91.	Telco/Inst	DLP-524
90	At the 1B MTC terminal, copy the correct and up-to-date SCS system files from the APS to all growth disk pair 0 by entering the following input messages, one at a time, **being sure to wait for the successful completion of each message before continuing to the next**: **COPY:SCS *x*, SCCSFT,SVN 0,DVN 0; UCL!** **COPY:SCS *x*, SCUOPR,SVN 0,DVN 0; UCL!** **COPY:SCS *x*, SCUDGN,SVN 0,DVN 0; UCL!** **COPY:SCS *x*, MSPFIX,SVN 0,DVN 0; UCL!** **COPY:SCS *x*, MSPROV,SVN 0,DVN 0; UCL!** **COPY:SCS *x*, TONES,SVN 0,DVN 0; UCL!** **where** *x* = Member Number (0-7) ***Note:*** Each of the above **COPY** commands could take up to 15 minutes to run. If any input message should fail, enter the message a second time before escalating the problem.	Telco/Inst	—
91	If the *4ESS* switch office **already has an in-service SCS complex**, go to Step 92. If the *4ESS* switch office **does NOT already have an in-service SCS complex**, go to Step 93.	Telco/Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
92	Update version numbers in the growth SCS Unit Type Translator.	Telco/Inst	DLP-523
93	At the 1B MTC terminal, diagnose each growth SCU and associated disk pair(s) by entering: **DGN:SCS** *a*,**SCU** *b*:**PH (1-10,***c***)!** where *a* = Member Number (0-7) *b* = SCU Number (0-15) *c* = Phase Number(s) for SCU MSP test: **12** for SCUs with MSP 0 **12-13** for SCUs with MSPs 0 and 1 **12-14** for SCUs with MSPs 0 through 2 **12-15** for SCUs with MSPs 0 through 3 Response: The screen returns output messages with ATP for each requested phase.	Telco/Inst	—
94	This is a **Safe Stop Point**. If stopping, perform Steps 95 and 96. Otherwise go to Step 98, being sure to read the heading and caution before Step 98.	Telco/Inst	—
95	At the 1B MTC terminal, allow REX by entering: **ALW:MACLI,CLASS MTCE!** Response: `AUTOMATIC JOB SCHEDULING RESUMED`	Telco	—
96	Stop procedure for now. Resume at Step 97 when continuing.	Telco/Inst	—
97	Perform Steps 2 through 7 of this procedure. Then continue to the next step.	Telco/Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
	MAKE OPERATIONAL AND RESTORE SCS CONTROLLERS 0 AND 1		
	Caution: Before proceeding, ensure that: • ***The KCN3 circuit packs for both SCC 0 and SCC 1 (EQL 048 and optional 056) are labeled series "5:5" or greater.*** • ***The UN351 circuit packs for both SCC 0 and SCC 1 (EQL 072) are labeled series "8:8" or greater.***		
98	At the 1B MTC terminal, diagnose SCS Controller 0 by entering: **DGN:SCS** *x*,**CONTR 0!** where *x* = Member Number (0-7) Response: The screen returns an output message with CATP. Bit **4** should be **set** in the CATP **reason word** indicating that the mate unit is out of service. This is the only allowable exception (no other bits in the CATP reason word should be set).	Telco/Inst	—
99	At the 1B MTC terminal, diagnose SCS Controller 1 by entering: **DGN:SCS** *x*,**CONTR 1!** where *x* = Member Number (0-7) Response: The screen returns an output message with CATP. Bit **4** should be **set** in the CATP **reason word** indicating that the mate unit is out of service. This is the only allowable exception (no other bits in the CATP reason word should be set).	Telco/Inst	—
100	At the 1B MTC terminal, run a Peripheral Unit Status audit by entering: **AUD:PUSTAT!** Response: MSG COMPL	Telco/Inst	—
101	Recent change SCS member equipage from SGRO to OPER using RC form 700.	Telco	DLP-508

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
	TN4000 SECOND DISK PACK INITIALIZATION		
	Note: Steps 102 through 106 should be completed only if TN4000 (4 Gb) circuit packs are being grown. Steps 102 through 106 must be completed for each growth SCU equipped with TN4000 circuit packs, beginning with the lowest numbered growth SCU. These steps must be completed in their entirety for each applicable growth SCU before continuing with the next growth SCU. ***Caution: TN4000 circuit packs can only be installed in disk pair locations 0 and 2. (Only SCU 0 has the physical capacity for installing disk pairs in locations 1, 2, and 3.) See Table A at the end of this procedure for allowable TN4000 disk pair locations.***		
102	Are TN4000 circuit packs being grown in location 0? If **Yes**, continue to Step 103. If **No**, continue to Step 104.	Telco/Inst	—
103	At the 1B MTC terminal, perform a soft initialization of Disk Pair 1, by entering the commands given below. ***Note:*** When populating a Type 2 (TN4000 - 4 Gb) disk pair at an SCU Disk Pair 0 location in the SCS Unit Type translator, the adjacent location Disk Pair 1 will also be populated. In order to ensure proper operation, a Soft Initialization (TYP 1) on both Bus 0 and Bus 1 is necessary for Disk Pair 1. 1. **INIT:SCS *x*,SCU *y*,DSK 1,BUS 0,TYP 1!** where *x* = Member Number (0-7) *y* = Submember Number (0-15) Response: `INIT:SCS x, SCU y COMPLETE` 2. **INIT:SCS *x*,SCU *y*,DSK 1,BUS 1,TYP 1!** where *x* = Member Number (0-7) *y* = Submember Number (0-15) Response: `INIT:SCS x, SCU y COMPLETE`	Telco/Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
104	Are TN4000 circuit packs being grown in location 2? If **Yes**, continue to Step 105. If **No**, continue to Step 106.	Telco/Inst	—
105	At the 1B MTC terminal, perform a soft initialization of SCU 0, Disk Pair 3, by entering the commands given below. ***Note:*** When populating a Type 2 (TN4000 - 4 Gb) disk pair at the SCU 0, Disk Pair 2 location in the SCS Unit Type translator, the adjacent location Disk Pair 3 will also be populated. In order to ensure proper operation, a Soft Initialization (TYP 1) on both Bus 0 and Bus 1 is necessary for Disk Pair 3. 1. **INIT:SCS *x*,SCU 0,DSK 3,BUS 0,TYP 1!** where *x* = Member Number (0-7) Response: `INIT:SCS x, SCU 0 COMPLETE` 2. **INIT:SCS *x*,SCU 0,DSK 3,BUS 1,TYP 1!** where *x* = Member Number (0-7) Response: `INIT:SCS x, SCU 0 COMPLETE`	Telco/Inst	—
106	Have Steps 102-105 been completed for all applicable growth SCUs? If **Yes**, continue to Step 107. If **No**, repeat Steps 102-105 for the next applicable growth SCU.	Telco/Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
107	Verify alarms for the Service Circuit Controller Cabinet, SCC 0, SCC 1, IPUB 0, IPUB 1, and all associated Service Circuit Unit Cabinets.	Inst	—
108	With the **ROS** switch on the TN1984 circuit pack in the NORMAL position at SCC 0, restore and initialize SCC 0 by entering the following input message at the 1B MTC terminal: **RST:SCS *x*,CONTR 0!** where *x* = Member Number (0-7) Response: The screen returns an output message with CATP, then RESTORE COMPLETE. Bit **21** will be **set** in the CATP **reason word** (unless the SCS is equipped with one or more SCUs in the SCU8 to SCU15 range), indicating that the unused EBI link test skipped. Bit **4** should also be **set** in the CATP **reason word** indicating that the mate unit is out of service. These are the only allowable exceptions (no other bits in the CATP reason word should be set).	Telco/Inst	—
109	With the **ROS** switch on the TN1984 circuit pack in the NORMAL position at SCC 1, restore and initialize SCC 1 by entering the following input message at the 1B MTC terminal: **RST:SCS *x*,CONTR 1!** where *x* = Member Number (0-7) Response: The screen returns an output message with CATP, then RESTORE COMPLETE. Bit **21** will be **set** in the CATP **reason word** (unless the SCS is equipped with one or more SCUs in the SCU8 to SCU15 range), indicating that the unused EBI link test skipped. This is the only allowable exception (no other bits in the CATP reason word should be set).	Telco/Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
110	At the growth SCS Cabinet, toggle the Request Out of Service (**ROS**) switch on the TN1984 circuit pack from NORMAL to ROS, then back to NORMAL, for both SCC 0 and 1. ***Note:*** When switches are toggled to ROS, the controllers are removed from SERVICE. When switched back to NORMAL, the controllers are diagnosed and successfully returned to SERVICE. ***Caution: SCC 0 must be RESTORED and IN-SERVICE prior to removing SCC 1.***	Inst	—
111	This is a **Safe Stop Point**. If stopping, perform Steps 112 and 113. Otherwise go to Step 115, being sure to read the heading and note above Step 115.	Telco/Inst	—
112	At the 1B MTC terminal, allow REX by entering: **ALW:MACLI,CLASS MTCE!** Response: `AUTOMATIC JOB SCHEDULING RESUMED`	Telco	—
113	Stop procedure for now. Resume at Step 114 when continuing.	Telco/Inst	—
114	Perform Steps 2 through 7 of this procedure. Then continue to the next step.	Telco/Inst	—
	ACTIVATION OF SCU/HDU EQUIPMENT ***Note:*** The SCUs and their associated TSI ports are to be made operational and restored one at a time, beginning with the lowest numbered SCU. **Steps 115 through 133 must be repeated for all growth SCUs and their connecting TSI ports.**		
115	At the 1B MTC terminal, apply port pest to an associated breakage TSI port by entering: **INH:TSI** *x*,**SPC** *y*,**PORT** *z*! where *x* = TSI Member Number (0-63) *y* = SPC within TSI (0-1) *z* = Port within SPC (0-6) Response: The input message is echoed when the pesting is done.	Telco	—

DO THE ITEMS BELOW IN THE ORDER LISTED		FOR DETAILS, GO TO	
116	Remove the output loop cables from the associated breakage TSI port. Then connect signal cables between the associated Breakage TSI port and the growth SCU.	Inst	—
117	At the 1B MTC terminal, diagnose the SCU and associated disk pair(s) using Phase 11 by entering: **DGN:SCS** *x*,**SCU** *z*:**PH 11!** where *x* = Member Number (0-7) *z* = Submember Number (0-15) Response: The screen returns an output message with ATP for Phase 11.	Telco/Inst	—
118	At the 1B MTC terminal, diagnose the Connecting Breakage TSI Frame Controller 0 by entering: **DGN:TSI** *x*,**CONTR 0:PH** *y*,**GROWTH!** where *x* = Member Number (0-63) *y* = 13 (for J4A001A) or 20 (for J4A001B) Response: The screen returns an output message with RMV: TSI *x*, CONTR 0 COMPL, *then* ATP for tests run.	Telco/Inst	—
119	At the 1B MTC terminal, restore TSI *x*, Controller 0 by entering: **RST:TSI** *x*,**CONTR 0!** where *x* = Member Number (0-63) Response: The screen returns an output message with ATP for all tests run, then RESTORE COMPLETE.	Telco/Inst	—
120	At the 1B MTC terminal, diagnose the Connecting Breakage TSI Frame Controller 1 by entering: **DGN:TSI** *x*,**CONTR 1:PH** *y*,**GROWTH!** where *x* = Member Number (0-63) *y* = 13 (for J4A001A) or 20 (for J4A001B) Response: The screen returns an output message with COMPLETED, then ATP for tests run.	Telco/Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
121	At the 1B MTC terminal, restore TSI x, Controller 1 by entering: **RST:TSI *x*,CONTR 1!** where *x* = Member Number (0-63) Response: The screen returns an output message with ATP for all tests run, then RESTORE COMPLETE.	Telco/Inst	—
122	Recent change and verify connecting breakage TSI submember equipage from SGRO to OPER using RC form 700.	Telco	DLP-511
123	At the 1B MTC terminal, diagnose the SCU and associated disk pair(s) using Phase 11 by entering: **DGN:SCS *x*,SCU *z*:PH 11!** where *x* = Member Number (0-7) *z* = Submember Number (0-15) Response: The screen returns an output message with ATP for Phase 11.	Telco/Inst	—
124	Recent change and verify the disk pair and MSP equipage of the associated growth SCU from SGRO to OPER using RC form 703.	Telco	DLP-509
125	Recent change and verify the associated SCU equipage from SGRO to OPER using RC form 700.	Telco	DLP-510
126	Verify alarms for the appropriate SCU(s) 0-15 and associated Disk Power Controllers.	Inst	—
127	At the 1B MTC terminal, run a Peripheral Unit Status audit by entering: **AUD:PUSTAT!** Response: MSG COMPL	Telco/Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
128	At the 1B MTC terminal, diagnose the growth SCU and associated disk pair(s) using demand phases of equipped disk pairs by entering the following input message: **DGN:SCS** *a*,**SCU** *b*:**PH** *c*-*d*! where *a* = Member Number (0-7) *b* = SCU Number (0-15) *c* = Beginning Phase Number (see Note) *d* = Ending Phase Number (see Note) ***Caution: For any SCU 0-15, if a Type 2 (4 Gb) TN4000 Disk Pair is being grown in the Disk Pair 0 location, diagnostic demand Phases 90, 91, 92, and 93 must be run sequentially within the same message. For SCU 0 only, if a Type 2 (4 Gb) Disk Pair is being grown in the Disk Pair 2 location, diagnostic demand Phases 94, 95, 96, and 97 must be run sequentially within the same message. For Type 0 (422 Mb TN1672) and Type 1 (2 Gb TN1972), follow the format below.*** **90** and **91** for Disk Pair 0 **92** and **93** for Disk Pair 1 (SCU 0 only) **94** and **95** for Disk Pair 2 (SCU 0 only) **96** and **97** for Disk Pair 3 (SCU 0 only) Response: The screen returns output messages with ATP for each requested phase. ***Note:*** The number of phases in the input message depends on the number of disk pairs equipped. This DGN message takes approximately 10 minutes per phase.	Telco/Inst	—
129	If an ASM-Plus **is not** present, go to Step 130. If an ASM-Plus **is** present and active, go to Step 131.	Telco/Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
130	At the 1B MTC terminal, inhibit the Local Area Network (LAN) by entering: **INH:SCS 0,LAN!** Response: The screen will return `CODE 091` followed by: `INH:SCS 0,LAN` ***Note:*** After completion, proceed to Step 132.	Telco/Inst	—
131	Add the growth SCU to the ASM-Plus's database, if applicable.	Telco/Inst	—
132	With the **ROS** switch on the TN1984 circuit pack in the NORMAL position at the SCU, restore and initialize the SCU and associated disk pair by entering the following input message at the 1B MTC terminal: **RST:SCS** *x*,**SCU** *z***!** where *x* = Member Number (0-7) *z* = Submember Number (0-15) Response: `ATP` `RST:SCS` *x*`, SCU` *z* `COMPL`	Telco/Inst	—
133	At the growth SCS cabinet, toggle the SCU's **ROS** switch on the TN1984 circuit pack from NORMAL to ROS, then back to NORMAL. ***Note:*** This will remove the SCU from SERVICE. When switched back to NORMAL, the SCU will be diagnosed and successfully returned to SERVICE.	Inst	—
134	This is a **Safe Stop Point**. If stopping, perform Steps 135 and 136. Otherwise go to Step 138.	Telco/Inst	—
135	At the 1B MTC terminal, allow REX by entering: **ALW:MACLI,CLASS MTCE!** Response: `AUTOMATIC JOB SCHEDULING RESUMED`	Telco	—
136	Stop procedure for now. Resume at Step 137 when continuing.	Telco/Inst	—
137	Perform Steps 2 through 7 of this procedure. Then continue to the next step.	Telco/Inst	—
138	Repeat Steps 115 through 133 for each growth SCU.	Telco	—

TABLE A Allowable Disk Pair Configurations When Using Type 2 (TN4000) Circuit Packs With SCU 0

Allowable Disk Pair Types			
Location 0	**Location 1**	**Location 2**	**Location 3**
2	X		
2	X	0	
2	X	0	0
2	X	1	
2	X	0	1
2	X	1	0
0	0	2	X
0	1	2	X
1	0	2	X
Where "X" indicates disk pair locations that **must be unpopulated**.			

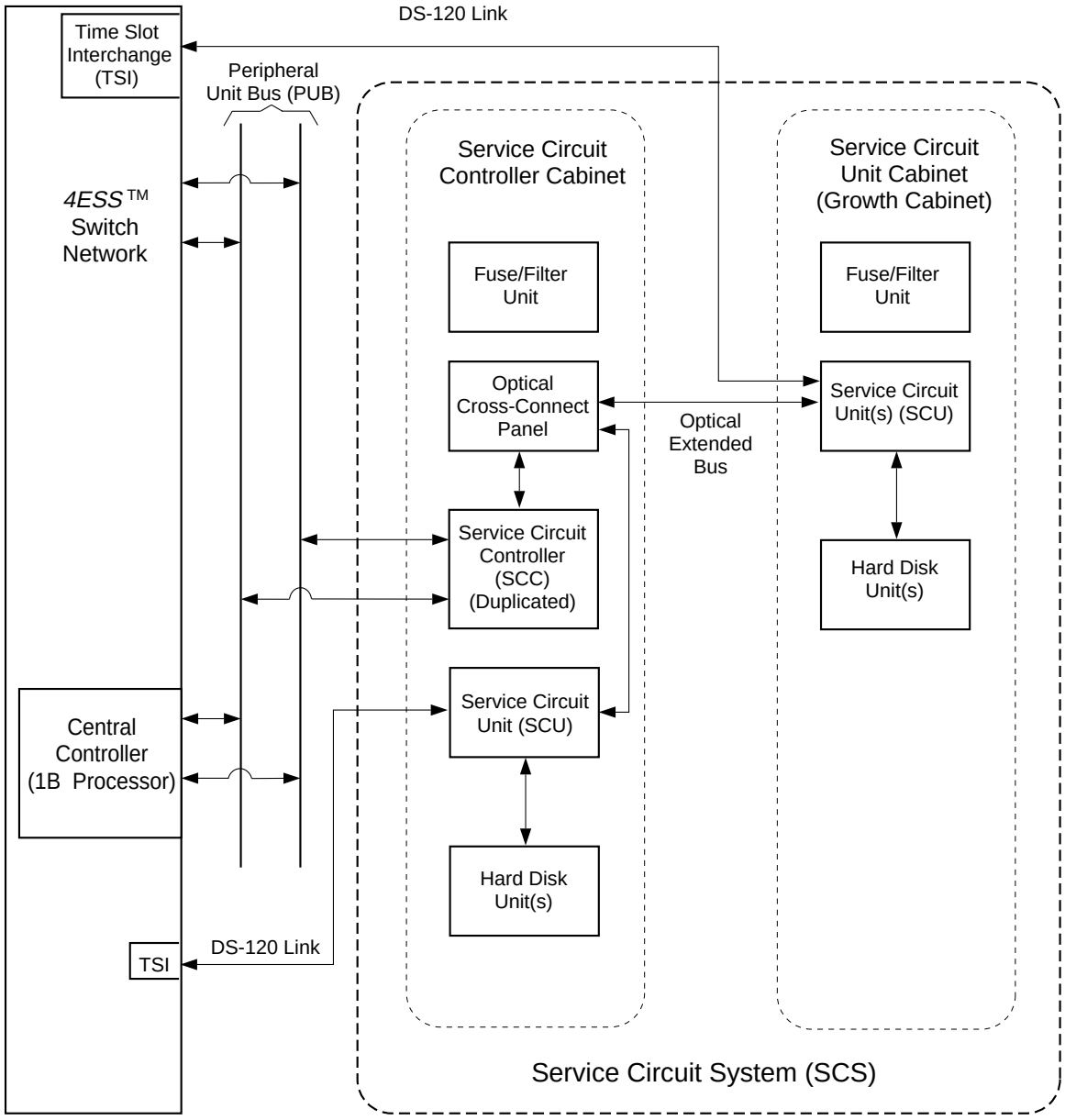

Figure 1. SCS Interface

Degrow Service Circuit System for Controller Unit/IPUB Replacement

Note: This degrow procedure is for replacing the Service Circuit System (SCS) controller unit integrated backplane. This degrow procedure assumes that the SCS complex is operational, in service, and, if applicable, connected to the Announcement System Manager (ASM) - Plus.

Caution: Do not use this procedure as a stand-alone procedure. This procedure should only be used when referenced from AT&T 234-151-077, Service Circuit System (SCS) Maintenance.

DO THE ITEMS BELOW IN THE ORDER LISTED		FOR DETAILS, GO TO	
1	Ensure that all responsible parties and organizations are aware of this degrowth before it starts. The appropriate *4ESS*™ switch support organizations must be contacted for instructions and/or assistance prior to this degrowth.	Telco	—
2	Ensure that within the last 24 hours the Processor has not experienced any TTY terminal suspends, bootstraps, diagnostic failures, or overloads.	Telco	—

3	Ensure that the AT&T 3B20 APS System, the APIs, and the 1B Processor are in the duplex mode, and that the 3B Control Units (CUs) are in ACTIVE-STANDBY mode. Routine Exercise (REX) and the Peripheral Unit System Exerciser (PUSYS) should be disabled, and should remain disabled during the entire degrowth process. This is accomplished by entering the following at the 1B Maintenance (MTC) terminal:
	
	1. **INH:MACLI,CLASS MTCE;REX!**
	
	Response: `MACLI,CLASS MTCE INHIBITED`
	`AUTOMATIC JOB SCHEDULING`
	`DISALLOWED`
	
	2. **STOP:TEST;PUSYS!**
	
	Response: `OK`
		Telco	—

4	Ensure that diagnostics on the duplexed 3B CUs have been run to completion within the last 24 hours.	Telco	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
5	Verify Unit Type (UT) Translator to determine and record TSI information, MSP equipage, and disk pair equipage **for each SCU to be degrown**. ***Note:*** This information will be used later in Steps 13, 14, and 16 of this NTP.	Telco/Inst	DLP-542
6	Ensure that diagnostics on the associated Breakage Time Slot Interchange (TSI) Frames have been run to completion within the last 24 hours.	Telco	—
7	Ensure that all processor and/or system problems have been cleared.	Telco	—
8	Ensure that no Software Updates (SUs)/Broadcast Warning Messages (BWMs) for SCS system files are applied during SCS degrowth.	Telco	—
9	Ensure that the ASM-Plus/SCS LAN connection is present and active, if applicable.	Telco	—
10	If the *4ESS* switch office has **only one SCS complex**, and the ASM-Plus is present and active, inhibit the LAN by entering the following input message. Otherwise, continue to Step 11, being sure to read the heading and note above Step 11. At the 1B MTC terminal, enter: **INH:SCS 0,LAN!** Response: The screen returns `Code 091` followed by `INH:SCS 0, LAN`	Telco/Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
	SCU DEGROWTH ***Note:*** The SCUs are to be degrown one at a time, starting with the lowest SCU number. Steps 11 through 18 should be completed in their entirety for one SCU before they are repeated for another SCU.		
11	At the 1B MTC terminal, take the appropriate SCU out of service by entering: **RMV:SCS** *a*,**SCU** *b*! where *a* = Member Number (0-7) *b* = SCU Number (0-15) Response: PF followed by: RMV:SCS *a*, SCU *b* COMPL ***Note:*** When taking an SCU out of service, office alarms may sound. Pressing the appropriate key at the MCC will retire these alarms.	Telco	—
12	At the 1B MTC terminal, apply port pest to the associated breakage TSI port by entering: **INH:TSI** *x*,**SPC** *y*,**PORT** *z*! where *x* = TSI Member Number (0-63) *y* = SPC within TSI (0-1) *z* = Port within SPC (0-6) Response: Input message is echoed when pesting is done.	Telco	—
13	At the 1B MTC terminal, determine which trunks are assigned to the degrowth SCU by entering: **VER:TRK:TSI** *a*,**SPC** *b*,**LVL** *c*,**FTS (1-120)!** where *a* = Associated Time Slot Interchange (TSI) Member Number (recorded in Step 5) *b* = Associated Switching and Permuting Circuits (SPC) Number (recorded in Step 5) *c* = Associated Level Number (Port Number) (recorded in Step 5) Response: The screen returns up to five VER:TRK messages followed by: VERIFY PROCESSING COMPLETE **Record** the First Traffic Number (FTFN), the Trunk Subgroup (TSG) data, and the Quantity of Trunks (QTRK) value from each of the VER:TRK messages.	Telco	—

DO THE ITEMS BELOW IN THE ORDER LISTED			**FOR DETAILS, GO TO**
14	Disable the trunks assigned to the degrowth SCU by entering the following input message **once for each of the FTFNs recorded in Step 13**: **SET:TRKSTAT CAD.DSA,CIN** *ab*;**SUM:NUM** *c*! where *a* = FTFN (recorded in Step 13) *b* = TSG associated with FTFN *a* (recorded in Step 13) The TSG will have one of the following three values (the **zzz** value is an office dependent code, and was recorded in Step 13 as part of the TSG): **SVC*SCNS*****zzz** **SVC*SCAN*****zzz** **SVC*SCBN*****zzz** *c* = QTRK value associated with FTFN (recorded in Step 13) Example: If the FTFN is **72**, the TSG is **SVC*SCAN***07T**, and the QTRK is 24, then the input message would be: SET:TRK CAD.DSA,CIN 72SVC*SCAN***07T;SUM:NUM 24! Response: `SET:TRK CAD.DSA CIN` *ab*`,SUM COMPLETED TRK COUNT` *c* ***Note:*** During trunk removal, office alarms will sound. Pressing the appropriate key at the MCC will retire these alarms.	Telco	—
15	Recent change and verify subunit data (disk pair and MSP equipage) for appropriate SCU from OPER to SGRO using Recent Change Form 703. ***Note:*** The current disk pair and MSP equipage was recorded in Step 5. After completion of this step, all disk pairs and MSP circuit packs for degrowth SCU(s) should be in the **SGRO** state.	Telco	DLP-519

DO THE ITEMS BELOW IN THE ORDER LISTED		FOR DETAILS, GO TO	
16	Recent change and verify subunit data (disk pair and MSP equipage) for appropriate SCU from SGRO to GROW using Recent Change Form 703. ***Note:*** The current disk pair and MSP equipage was recorded in Step 5. After completion of this step, all disk pairs and MSP circuit packs for degrowth SCU(s) should be in the **GROW** state.	Telco	DLP-530
17	Recent change and verify SCU equipage from OPER to SGRO using Recent Change Form 701.	Telco	DLP-513
18	Recent change and verify SCU equipage from SGRO to GROW using Recent Change Form 701.	Telco	DLP-535
19	This is a **Safe Stop Point**. If stopping, perform Steps 20 and 21. Otherwise go to Step 23.	Telco/Inst	—
20	At the 1B MTC terminal, allow REX by entering: **ALW:MACLI,CLASS MTCE!** Response: `AUTOMATIC JOB SCHEDULING RESUMED`	Telco	—
21	Stop procedure for now. Resume at Step 22 when continuing.	Telco/Inst	—
22	Perform Steps 2 through 4 and Steps 6 through 9 of this procedure. Then continue to the next step.	Telco/Inst	—
23	If Steps 11 through 18 have not been completed for each SCU to be degrown, repeat these steps, as applicable, for the remaining degrowth SCUs.	Telco/Inst	—
	SCS MEMBER DEGROWTH ***Caution: All SCUs must be in the* GROW *state prior to member degrowth.***		
24	Degrow member equipage from OPER to SGRO using Recent Change Form 701. ***Note:*** The switch will automatically run an Audit 32 indicating the changed status of the SCS frame.	Telco	DLP-514

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
25	Degrow member equipage from SGRO to GROW using Recent Change Form 701. ***Note:*** The switch will automatically run an Audit 32 indicating the changed status of the SCS frame.	Telco	DLP-537
26	At the 1B MTC terminal, run a Peripheral Unit Status audit by entering: **AUD:PUSTAT!** Response: `MSG COMPL` ***Note:*** The response will show the old status and the new status. The appropriate SCS Complex will be Out-Of-Service.	Telco/Inst	—
27	At the 1B MTC terminal, run Audit 32 by entering: **AUD:NUM 32!** Response: The response shows the old mask and the new mask or `NUM 32 COMPLETE 0 ERRORS DETECTED`. Both are valid responses.	Telco/Inst	—
28	This is a **Safe Stop Point**. If stopping, perform Steps 29 and 30. Otherwise go to Step 32.	Telco/Inst	—
29	At the 1B MTC terminal, allow REX by entering: **ALW:MACLI,CLASS MTCE!** Response: `AUTOMATIC JOB SCHEDULING RESUMED`	Telco	—
30	Stop procedure for now. Resume at Step 31 when continuing.	Telco/Inst	—
31	Perform Steps 2 through 4 and Steps 6 through 9 of this procedure. Then continue to the next step.	Telco/Inst	—
32	Remove the degrown SCS complex from the PUB using TOP 234-153-045.	Telco/Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
33	Power-down the SCS complex. 1. At all Hard Drive Units (HDUs), simultaneously press the **OFF** and **MOR** buttons on the UN356 circuit pack. 2. At all SCUs, simultaneously press the **OFF** and **MOR** buttons on the TN1984 circuit pack. 3. At IPUB 0 and 1, simultaneously press the **OFF** and **MOR** buttons on the TN1671 circuit pack. 4. At SCC 0 and 1, simultaneously press the **OFF** and **MOR** buttons on the TN1984 circuit pack.	Inst	—
34	Disconnect/defuse the power between the Power Distribution Frame (PDF) and the degrown SCS frame.	Inst	—
35	At the 1B MTC terminal, allow REX by entering: **ALW:MACLI,CLASS MTCE!** Response: `AUTOMATIC JOB SCHEDULING RESUMED`	Telco	—

Grow Service Circuit System After Controller Unit Replacement

Caution: Do not use this procedure as a stand-alone procedure. This procedure should only be used when referenced from AT&T 234-151-077, Service Circuit System (SCS) Maintenance.

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
1	Ensure that within the last 24 hours the Processor has not experienced any TTY terminal suspends, bootstraps, diagnostic failures, or overloads.	Telco	—
2	Ensure that the AT&T 3B20 APS System, the APIs, and the 1B Processor are in the duplex mode, and that the 3B Control Units (CUs) are in ACTIVE-STANDBY mode. Routine Exercise (REX) and the Peripheral Unit System Exerciser (PUSYS) should be disabled, and should remain disabled during the entire growth process. This is accomplished by entering the following at the 1B Maintenance (MTC) terminal: 1. **INH:MACLI,CLASS MTCE;REX!** Response: `MACLI,CLASS MTCE INHIBITED AUTOMATIC JOB SCHEDULING DISALLOWED` 2. **STOP:TEST;PUSYS!** Response: `OK`	Telco	—
3	Ensure that diagnostics on the duplexed 3B CUs have been run to completion within the last 24 hours.	Telco	—
4	Verify Unit Type (UT) Translator to determine and record TSI information, MSP equipage, and disk pair equipage **for each SCU to be grown**. ***Note:*** This information will be used later in other steps of this NTP.	Telco/Inst	DLP-542
5	Ensure that diagnostics on the associated Breakage Time Slot Interchange (TSI) Frames have been run to completion within the last 24 hours. For diversity, a minimum of two Breakage TSI Frames will be used when assigning TSI Ports to Service Circuit Units (SCUs).	Telco	—
6	Ensure that all processor and/or system problems have been cleared.	Telco	—

DO THE ITEMS BELOW IN THE ORDER LISTED		FOR DETAILS, GO TO	
7	Ensure that no Software Updates (SUs)/Broadcast Warning Messages (BWMs) for SCS system files are applied during SCS Growth.	Telco	—
8	Ensure that the ASM-Plus/SCS LAN connection is present and active, if applicable.	Telco	—
9	Connect/fuse the power between the Power Distribution Frame (PDF) and the degrown SCS frame.	Inst	—
10	Verify that the controller backplane has -48V at each set of power lugs. ***Caution: Make sure the voltage has the proper polarity.***	Inst	—
11	Install circuit packs in SCC 0 and SCC 1, using current Electro-Static Discharge (ESD) practices.	Inst	—
12	Power-up the SCS cabinets. 1. At IPUB 0 and 1, press the **ON** button on the Integrated Power Controller (IPC) TN1671 circuit pack. 2. At SCC 0 and 1, press the **ON** button on the Master Power Controller (MPC) TN1984 circuit pack. 3. At all Hard Drive Units, press the **ON** button on the Disk Power Controller (DPC) UN356 circuit pack. ***Note:*** Wait at least 60 seconds before proceeding with the next step. This allows the disk drives to spin up to operational speed. 4. At all SCUs, press the **ON** button on the MPC TN1984 circuit pack.	Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
13	Verify that member equipage, submember equipage, and subunit data equipage are in the **Grow** state.	Telco	DLP-520
14	This is a **Safe Stop Point**. If stopping, perform Steps 15 and 16. Otherwise go to Step 18.	Telco/Inst	—
15	At the 1B MTC terminal, allow REX by entering: **ALW:MACLI,CLASS MTCE!** Response: `AUTOMATIC JOB SCHEDULING RESUMED`	Telco	—
16	Stop procedure for now. Resume at Step 17 when continuing.	Telco/Inst	—
17	Perform Steps 1 through 3 and Steps 5 through 8 of this procedure. Then continue to the next step.	Telco/Inst	—
18	Extend or insert PUB per TOP 234-153-045.	Telco/Inst	—
19	This is a **Safe Stop Point**. If stopping, perform Steps 20 and 21. Otherwise go to Step 23.	Telco/Inst	—
20	At the 1B MTC terminal, allow REX by entering: **ALW:MACLI,CLASS MTCE!** Response: `AUTOMATIC JOB SCHEDULING RESUMED`	Telco	—
21	Stop procedure for now. Resume at Step 22 when continuing.	Telco/Inst	—
22	Perform Steps 1 through 3 and Steps 5 through 8 of this procedure. Then continue to the next step.	Telco/Inst	—
23	At the 1B Maintenance (MTC) terminal, remove PUB 0 from service by entering: **RMV:PUB 0!** Response: `PF` `RMV:PUB 0 COMPL`	Telco	—
24	Ensure that power is applied to Growth SCS IPUB 0 and Controllers 0 and 1.	Inst	—
25	Power-down IPUB 1 by simultaneously pressing the **OFF** and **MOR** buttons on the Integrated Power Controller (IPC) TN1671 circuit pack at IPUB 1.	Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
26	At the 1B MTC terminal, diagnose SCS Controller 0, Phases 1 and 2, using PUB 0, by entering: **DGN:SCS x,CONTR 0:PUB 0,PH 1-2!** where *x* = Member Number (0-7) Response: The screen returns an output message with CATP. Bits **1** and **11** should be **set** in the CATP **reason word** indicating that PUB 1 is out of service and the PUB is not duplex. This is the only allowable exception (no other bits in the CATP reason word should be set).	Telco/Inst	—
27	At the 1B MTC terminal, diagnose SCS Controller 1, Phases 1 and 2, using PUB 0, by entering: **DGN:SCS x,CONTR 1:PUB 0,PH 1-2!** where *x* = Member Number (0-7) Response: The screen returns an output message with CATP. Bits **1** and **11** should be **set** in the CATP **reason word** indicating that PUB 1 is out of service and the PUB is not duplex. This is the only allowable exception (no other bits in the CATP reason word should be set).	Telco/Inst	—
28	At the 1B MTC terminal, diagnose SCS Controller 0, Phases 1 through 9, using PUB 0, by entering: **DGN:SCS x,CONTR 0:PUB 0,PH 1-9!** where *x* = Member Number (0-7) Response: The screen returns an output message with CATP. Bits **1** and **11** should be **set** in the CATP **reason word** indicating that PUB 1 is out of service and the PUB is not duplex. This is the only allowable exception (no other bits in the CATP reason word should be set).	Telco/Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
29	At the 1B MTC terminal, diagnose SCS Controller 1, Phases 1 through 9, using PUB 0, by entering: **DGN:SCS x,CONTR 1:PUB 0,PH 1-9!** where *x* = Member Number (0-7) Response: The screen returns an output message with CATP. Bits **1** and **11** should be **set** in the CATP **reason word** indicating that PUB 1 is out of service and the PUB is not duplex. This is the only allowable exception (no other bits in the CATP reason word should be set).	Telco/Inst	—
30	Remove power from SCS IPUB 0.	Inst	—
31	At the 1B MTC terminal, restore PUB 0 to service by entering: **RST:PUB 0!** Response: PF RST:PUB 0 COMPL	Telco/Inst	—
32	At the 1B MTC terminal, remove PUB 1 from service by entering: **RMV:PUB 1!** Response: PF RMV:PUB 1 COMPL	Telco	—
33	Apply power to SCS IPUB 1.	Inst	—
34	At the 1B MTC terminal, diagnose SCS Controller 0, Phases 1 and 2, using PUB 1, by entering: **DGN:SCS x,CONTR 0:PUB 1,PH 1-2!** where *x* = Member Number (0-7) Response: The screen returns an output message with CATP. Bits **0** and **11** should be **set** in the CATP **reason word** indicating that PUB 0 is out of service and the PUB is not duplex. This is the only allowable exception (no other bits in the CATP reason word should be set).	Telco/Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
35	At the 1B MTC terminal, diagnose SCS Controller 1, Phases 1 and 2, using PUB 1, by entering: **DGN:SCS x,CONTR 1:PUB 1,PH 1-2!** where *x* = Member Number (0-7) Response: The screen returns an output message with CATP. Bits **0** and **11** should be **set** in the CATP **reason word** indicating that PUB 0 is out of service and the PUB is not duplex. This is the only allowable exception (no other bits in the CATP reason word should be set).	Telco/Inst	—
36	At the 1B MTC terminal, diagnose SCS Controller 0, Phases 1 through 9, using PUB 1, by entering: **DGN:SCS x,CONTR 0:PUB 1,PH 1-9!** where *x* = Member Number (0-7) Response: The screen returns an output message with CATP. Bits **0** and **11** should be **set** in the CATP **reason word** indicating that PUB 0 is out of service and the PUB is not duplex. This is the only allowable exception (no other bits in the CATP reason word should be set).	Telco/Inst	—
37	At the 1B MTC terminal, diagnose SCS Controller 1, Phases 1 through 9, using PUB 1, by entering: **DGN:SCS x,CONTR 1:PUB 1,PH 1-9!** where *x* = Member Number (0-7) Response: The screen returns an output message with CATP. Bits **0** and **11** should be **set** in the CATP **reason word** indicating that PUB 0 is out of service and the PUB is not duplex. This is the only allowable exception (no other bits in the CATP reason word should be set).	Telco/Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
38	At the 1B MTC terminal, restore PUB 1 to service by entering: **RST:PUB 1!** Response: `PF` `RST:PUB 1 COMPL`	Telco/Inst	—
39	Apply power to SCS IPUB 0. Response: `REPT: SCS 0, IPUB 0 GROWTH UNIT PCS TRANSITION`	Inst	—
40	At the 1B MTC terminal, diagnose SCS Controller 0, Phases 1 through 9, by entering: **DGN:SCS x,CONTR 0:PH 1-9!** where *x* = Member Number (0-7) Response: The screen returns output messages with `ATP` for each requested phase.	Telco/Inst	—
41	At the 1B MTC terminal, diagnose SCS Controller 1, Phases 1 through 9, by entering: **DGN:SCS x,CONTR 1:PH 1-9!** where *x* = Member Number (0-7) Response: The screen returns output messages with `ATP` for each requested phase.	Telco/Inst	—
42	Recent change SCS member equipage from GROW to SGRO using RC form 700.	Telco	DLP-501
43	At the 1B MTC terminal, diagnose Controller 0 by entering the following input message: **DGN:SCS x,CONTR 0!** where *x* = Member Number (0-7) Response: The screen returns an output message with `CATP`. Bit **4** should be **set** in the CATP **reason word** indicating that the mate unit is out of service. No other bits in the CATP reason word should be set.	Telco/Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
44	At the 1B MTC terminal, diagnose Controller 1 by entering the following input message: **DGN:SCS x,CONTR 1!** where *x* = Member Number (0-7) Response: The screen returns an output message with CATP. Bit **4** should be **set** in the CATP **reason word** indicating that the mate unit is out of service. No other bits in the CATP reason word should be set.	Telco/Inst	—
45	At the 1B MTC terminal, run a Peripheral Unit Status audit by entering: **AUD:PUSTAT!** Response: MSG COMPL ***Note:*** The response will show the old status and the new status.		
46	Recent change SCS member equipage from SGRO to OPER using RC form 700.	Telco	DLP-508
47	At the 1B MTC terminal, restore SCS Controller 0 by entering: **RST:SCS x,CONTR 0!** where *x* = Member Number (0-7) Response: The screen returns an output message with CATP, then RESTORE COMPLETE. Bits **4** and **19** should be **set** in the CATP **reason word** indicating, respectively, that the mate unit is out of service and the unused EBI link test skipped. No other bits in the CATP reason word should be set.	Telco/Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
48	At the 1B MTC terminal, restore SCS Controller 1 by entering: **RST:SCS x,CONTR 1!** where *x* = Member Number (0-7) Response: The screen returns an output message with `CATP`, then `RESTORE COMPLETE`. Bit **19** should be **set** in the CATP **reason word**, indicating that the unused EBI link test skipped. No other bits in the CATP reason word should be set.	Telco/Inst	—
49	At each of the controllers (0 and 1), toggle the Request Out-of-Service (**ROS**) switch on the TN1984 circuit pack from NORMAL to ROS position, then back to the NORMAL position. ***Note:*** When switches are toggled to ROS, the controllers are removed from service. When switched back to NORMAL, the controllers are diagnosed and successfully returned to service. **SCC 0 must be restored and in service prior to removing SCC 1.**	Inst	—
50	This is a **Safe Stop Point**. If stopping, perform Steps 51 and 52. Otherwise go to Step 54, being sure to read the heading and note above Step 54.	Telco/Inst	—
51	At the 1B MTC terminal, allow REX by entering: **ALW:MACLI,CLASS MTCE!** Response: `AUTOMATIC JOB SCHEDULING RESUMED`	Telco	—
52	Stop procedure for now. Resume at Step 53 when continuing.	Telco/Inst	—
53	Perform Steps 1 through 3 and Steps 5 through 8 of this procedure. Then continue to the next step.	Telco/Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
	SCU GROWTH ***Note:*** The SCUs are to be grown one at a time, starting with the lowest SCU number. Steps 54 through 61 should be completed in their entirety for one SCU before they are repeated for another SCU.		
54	Recent change and verify the SCU's subunit data from GROW to SGRO using RC form 703. ***Note:*** The current number of disk pairs and MSP circuit packs, associated with each growth SCU, was recorded in Step 4.	Telco	DLP-505
55	Recent change and verify the SCU equipage from GROW to SGRO using Recent Change Form 700.	Telco	DLP-504
56	At the 1B MTC terminal, diagnose each growth SCU and associated disk pair(s) by entering: **DGN:SCS** *a*,**SCU** *b*:**PH 1-***c*! where *a* = Member Number (0-7) *b* = SCU Number (0-15) *c* = Phase Number for SCU MSP test: **12** for SCUs with MSP 0 **13** for SCUs with MSPs 0 and 1 **14** for SCUs with MSPs 0 through 2 **15** for SCUs with MSPs 0 through 3 Response: The screen returns output messages with ATP for each requested phase.	Telco/Inst	—
57	Recent change and verify the SCU's subunit data from SGRO to OPER using RC form 703. ***Note:*** The current number of disk pairs and MSP circuit packs, associated with each growth SCU, was recorded in Step 4. Ensure that all disk pairs and MSPs are grown at this time.	Telco	DLP-509

DO THE ITEMS BELOW IN THE ORDER LISTED		FOR DETAILS, GO TO	
58	Recent change and verify the SCU equipage from SGRO to OPER using Recent Change Form 700.	Telco	DLP-510
59	At the 1B MTC terminal, run a Peripheral Unit Status audit by entering: **AUD:PUSTAT!** Response: `MSG COMPL` ***Note:*** The response shows the old status and new status.	Telco/Inst	—
60	At the 1B MTC terminal, restore the SCU and associated disk pair(s) by entering: **RST:SCS x,SCU z!** where *x* = Member Number (0-7) *z* = Submember Number (0-15) Response: `DGN COMPLETED ATP` `RESTORE COMPLETE`	Telco/Inst	—
61	At the growth SCS cabinet, toggle the SCU's **ROS** switch on the TN1984 circuit pack from NORMAL to ROS, then back to NORMAL. ***Note:*** This will remove the SCU from SERVICE. When switched back to NORMAL, the SCU will be diagnosed and successfully returned to SERVICE.	Inst	—
62	This is a **Safe Stop Point**. If stopping, perform Steps 63 and 64. Otherwise go to Step 66.	Telco/Inst	—
63	At the 1B MTC terminal, allow REX by entering: **ALW:MACLI,CLASS MTCE!** Response: `AUTOMATIC JOB SCHEDULING RESUMED`	Telco	—
64	Stop procedure for now. Resume at Step 65 when continuing.	Telco/Inst	—
65	Perform Steps 1 through 3 and Steps 5 through 8 of this procedure. Then continue to the next step.	Telco/Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
66	Repeat Steps 54 through 61 for all appropriate SCUs. If Steps 54 through 61 have already been completed for all appropriate SCUs, continue to Step 67.	Telco/Inst	—
67	Verify Unit Type (UT) Translator to determine TSI information **for each growth SCU**. This information is necessary for enabling trunks. ***Note:*** This information will be used later in other steps of this NTP.	Telco	DLP-522
	ENABLING TRUNKS ***Note:*** Steps 68 and 69 are to be completed for each growth SCU. These steps should both be completed for one SCU before they are repeated for another SCU. Begin with the lowest SCU number.		
68	At the 1B MTC terminal, determine which trunks are assigned to the growth SCU by entering: **VER:TRK:TSI *a*,SPC *b*,LVL *c*,FTS (1-120)!** where *a* = Associated Time Slot Interchange (TSI) Member Number (recorded in Step 67) *b* = Associated Switching and Permuting Circuits (SPC) Number (recorded in Step 67) *c* = Associated Level Number (Port Number) (recorded in Step 67) Response: The screen returns up to 5 `VER:TRK` messages followed by: `VERIFY PROCESSING COMPLETE` Record the First Traffic Number (FTFN), Trunk Subgroup (TSG), and Quantity of Trunks (QTRK) data from each of the `VER:TRK` messages.	Telco	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
69	Enable the trunks assigned to the growth SCU by entering the following input message at the 1B MTC terminal, **once for each of the FTFNs recorded in Step 68**. **SET:TRKSTAT ACT,CIN** *ab*;**SUM:NUM** *c*! where *a* = FTFN (recorded in Step 68) *b* = TSG associated with FTFN *a* (recorded in Step 68). The TSG will have one of the following three values (the **zzz** value is an office dependent code, and was recorded in Step 68 as part of the TSG): **SVC*SCNS*****zzz** **SVC*SCAN*****zzz** **SVC*SCBN*****zzz** *c* = QTRK value associated with FTFN (recorded in Step 68) Example: If the FTFN is `72`, and the TSG is `SVC*SCAN***07T`, then the input message would be: **SET:TRKSTAT ACT,CIN 72SVC*SCAN***07T;SUM:NUM 24!** Response: `SET:TRKSTAT ACT CIN` *ab*`,SUM COMPLETED TRK COUNT` *c*	Telco	—
70	Repeat Steps 68 and 69 for all appropriate SCUs.	Telco/Inst	—
71	If the *4ESS* switch office has **only one SCS complex**, the ASM-Plus is present and active, and the Local Area Network (LAN) has been inhibited, enable the LAN by entering the following message. Otherwise, continue to Step 72. At the 1B MTC terminal, enter: **ALW:SCS 0,LAN!** Response: The screen returns `Code 091` followed by `ALW:SCS 0, LAN`	Telco/Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED		**FOR DETAILS, GO TO**	
72	At the 1B MTC terminal, allow REX by entering: **ALW:MACLI,CLASS MTCE!** Response: `AUTOMATIC JOB SCHEDULING RESUMED`	Telco	—

Degrow Service Circuit System (SCS) Complex or Service Circuit Unit (SCU)

Note: This degrow procedure can be used to degrow a single SCU, multiple SCUs, or an entire SCS complex. This degrow procedure assumes that the SCS complex is operational, in service, and connected to the Announcement System Manager (ASM) - Plus, if applicable.

DO THE ITEMS BELOW IN THE ORDER LISTED			**FOR DETAILS, GO TO**
1	Ensure that all responsible parties and organizations are aware of this degrowth before it starts. The appropriate *4ESS* switch support organizations must be contacted for instructions and/or assistance prior to the degrowth of the SCS complex.	Telco	—
2	Ensure that within the last 24 hours the Processor has not experienced any TTY terminal suspends, bootstraps, diagnostic failures, or overloads.	Telco	—

3	Ensure that disks and Input/Output Processors (IOPs) are in duplex and that 3B Control Units (CUs) are in ACTIVE-STANDBY mode. Routine Exercise (REX) should be disabled, and should remain disabled during the entire growth process. This is accomplished by entering the following at the 1B Maintenance (MTC) terminal:
	
	1. **INH:MACLI,CLASS MTCE;REX!**
	
	Response: `MACLI,CLASS MTCE INHIBITED`
	`AUTOMATIC JOB SCHEDULING`
	`DISALLOWED`
	
	2. **STOP:TEST;PUSYS!**
	
	Response: `OK`
		Telco	—

4	Ensure that diagnostics on the duplexed 3B CUs have been run to completion within the last 24 hours.	Telco	—
5	Verify Unit Type (UT) Translator to determine TSI information, MSP equipage, and disk pair equipage **for each SCU to be degrown**. ***Note:*** This information will be used later in other steps of this NTP.	Telco/Inst	DLP-542

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
6	Ensure that diagnostics on the associated Breakage Time Slot Interchange (TSI) Frames have been run to completion within the last 24 hours.	Telco	—
7	Ensure that all processor and/or system problems have been cleared.	Telco	—
8	Ensure that no Software Updates (SUs)/Broadcast Warning Messages (BWMs) for SCS system files are applied during SCS degrowth.	Telco	—
9	Ensure that the ASM-Plus/SCS LAN connection is present and active, if applicable.	Telco	—
10	If the *4ESS* switch office has only one SCS complex, the ASM-Plus is present and active, and the entire complex is being degrown, enter the following input message. Otherwise, continue to Step 11, being sure to read the heading and note above Step 11. At the 1B MTC terminal, enter: **INH:SCS 0,LAN!** Response: The screen returns `Code 091` followed by `INH:SCS 0, LAN`	Telco/Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
	SCU DEGROWTH ***Note:*** When degrowing more than one SCU, the SCUs are to be degrown one at a time, starting with the lowest numbered SCU of those being degrown. (Repeat Steps 11-15 for each SCU).		
11	At the 1B MTC terminal, take the appropriate SCU out of service by entering: **RMV:SCS** *a*,**SCU** *b*! where *a* = Member Number (0-7) *b* = SCU Number (0-15) Response: PF followed by: `RMV:SCS` *a*, `SCU` *b* `COMPL` ***Note:*** When taking an SCU out of service, office alarms may sound. Pressing the appropriate key at the MCC will retire these alarms.	Telco	—
12	At the 1B MTC terminal, determine which trunks are assigned to the degrowth SCU by entering: **VER:TRK:TSI** *a*,**SPC** *b*,**LVL** *c*,**FTS (1-120)!** where *a* = Associated Time Slot Interchange (TSI) Member Number (recorded in Step 5) *b* = Associated Switching and Permuting Circuits (SPC) Number (recorded in Step 5) *c* = Associated Level Number (Port Number) (recorded in Step 5) Response: The screen returns up to 5 `VER:TRK` messages followed by: `VERIFY PROCESSING COMPLETE` Record the First Traffic Number (FTFN), the Trunk Subgroup (TSG) data, and the Quantity of Trunks (QTRK) value from each of the `VER:TRK` messages.	Telco	—

DO THE ITEMS BELOW IN THE ORDER LISTED			**FOR DETAILS, GO TO**
13	Disable the trunks assigned to the degrowth SCU by entering the following input message **once for each of the FTFNs recorded in Step 12**: **SET:TRKSTAT CAD.DSA,CIN** *ab*;**SUM:NUM** *c*! where *a* = FTFN (recorded in Step 12) *b* = TSG associated with FTFN *a* (recorded in Step 12). The TSG will have one of the following three values (the **zzz** value is an office dependent code, and was recorded in Step 12 as part of the TSG): **SVC*SCNS*****zzz** **SVC*SCAN*****zzz** **SVC*SCBN*****zzz** *c* = QTRK value associated with FTFN (recorded in Step 12) Example: If the FTFN is 72, the TSG is SVC*SCAN***07T, and the QTRK is 24, then the input message would be: **SET:TRKSTAT CAD.DSA,CIN 72SVC*SCAN***07T;SUM:NUM 24!** Response: SET:TRKSTAT CAD.DSA CIN *ab*,SUM COMPLETED TRK COUNT *c* ***Note:*** During trunk removal, office alarms will sound. Pressing the appropriate key on the MCC will retire these alarms. ***Caution: If the SCU is being degrown to change service circuit type, the associated trunks must be removed from service.***	Telco	—
14	Degrow SCU subunit data (disk pair and MSP equipage) from OPER to SGRO using Recent Change Form 703. ***Note:*** The current disk pair and MSP equipage was recorded in Step 5.	Telco	DLP-519

DO THE ITEMS BELOW IN THE ORDER LISTED		FOR DETAILS, GO TO	
15	Degrow SCU from OPER to SGRO using Recent Change Form 701. ***Note:*** An SCU can be degrown and remain in the SGRO state.	Telco	DLP-513
16	This is a **Safe Stop Point**. If stopping, perform Steps 17 and 18. Otherwise go to Step 20.	Telco/Inst	—
17	At the 1B MTC terminal, allow REX by entering: **ALW:MACLI,CLASS MTCE!** Response: `AUTOMATIC JOB SCHEDULING RESUMED`	Telco	—
18	Stop procedure for now. Resume at Step 19 when continuing.	Telco/Inst	—
19	Perform Steps 2 through 4 and Steps 6 through 9 of this procedure. Then continue to the next step.	Telco/Inst	—
20	Repeat Steps 11 through 15 for each SCU to be degrown.	Telco	—
	Note: If the entire SCS complex is to be degrown, proceed to Step 21. If not, and an SCU needs to be degrown to the UNEQ state and the circuit packs need to be removed, proceed to Step 28, being sure to read the note above Step 28.		
21	***Caution: All SCUs must be degrown prior to member degrowth.*** Degrow member equipage from OPER to SGRO using Recent Change Form 701. ***Note:*** The switch will automatically run an Audit 32 indicating the changed status of the SCS frame.	Telco	DLP-514
22	At the 1B MTC terminal, run a Peripheral Unit Status audit by entering: **AUD:PUSTAT!** Response: `MSG COMPL` ***Note:*** The response shows old status and new status. The appropriate SCS Complex will be out of service.	Telco/Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
23	At the 1B MTC terminal, run Audit 32 by entering: **AUD:NUM 32!** Response: The response shows the old mask and the new mask or `NUM 32 COMPLETE 0 ERRORS DETECTED`. Both are valid responses.	Telco/Inst	—
24	This is a **Safe Stop Point**. If stopping, perform Steps 25 and 26. Otherwise go to Step 28, being sure to read the note above Step 28.	Telco/Inst	—
25	At the 1B MTC terminal, allow REX by entering: **ALW:MACLI,CLASS MTCE!** Response: `AUTOMATIC JOB SCHEDULING RESUMED`	Telco	—
26	Stop procedure for now. Resume at Step 27 when continuing.	Telco/Inst	—
27	Perform Steps 2 through 4 and Steps 6 through 9 of this procedure. Then continue to the next step.	Telco/Inst	—
	Note: Steps 28 through 48 must be completed for each SCU being degrown, beginning with the lowest SCU number. These steps should be completed in their entirety for one SCU, then the next SCU, and so forth.		
28	Degrow TSI submember equipage (of the TSI recorded in Step 5) from OPER to SGRO using Recent Change Form 701.	Telco	DLP-529
29	At the 1B MTC terminal, apply port pest to the associated breakage TSI port (of the TSI recorded in Step 5) by entering: **INH:TSI** *x*,**SPC** *y*,**PORT** *z*! where *x* = TSI Member Number (0-63) *y* = SPC within TSI (0-1) *z* = Port within SPC (0-6) Response: Input message is echoed when pesting is done.	Telco	—
30	Degrow SCU submember equipage (disk pair and MSP equipage) from SGRO to GROW using Recent Change Form 703.	Telco	DLP-530
31	Degrow SCU submember equipage (disk pair and MSP equipage) from GROW to UNEQ using Recent Change Form 703.	Telco	DLP-531

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
32	Degrow SCU equipage from SGRO to GROW using Recent Change Form 701.	Telco	DLP-535
33	Degrow SCU equipage from GROW to UNEQ using Recent Change Form 701.	Telco	DLP-536
34	Degrow TSI submember equipage from SGRO to GROW using Recent Change Form 701.	Telco	DLP-532
35	Degrow TSI submember equipage from GROW to UNEQ using Recent Change Form 701.	Telco	DLP-533
36	Remove the DS-120 cable at the TSI port and install its looping cable/plug.	Inst	—
37	At the 1B MTC terminal, remove the pest from the degrown TSI port by entering: **ALW:TSI x,SPC y,PORT z!** where *x* = TSI Member Number (0-63) *y* = SPC within TSI (0-1) *z* = Port within SPC (0-6) Response: `PF` `ALW:TSI x,SPC y,PORT z!`	Telco/Inst	—
38	At the 1B MTC terminal, diagnose the Connecting Breakage TSI Frame Controller 0 by entering: **DGN:TSI x,CONTR 0!** where *x* = TSI Member Number (0-63) Response: The screen returns an output message with `REMOVE COMPLETE`, then `ATP` for tests run.	Telco/Inst	—
39	At the 1B MTC terminal, restore TSI x, Controller 0 by entering: **RST:TSI x,CONTR 0!** where *x* = TSI Member Number (0-63) Response: The screen returns an output message with `ATP` for all tests run, then `RESTORE COMPLETE`.	Telco/Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED		FOR DETAILS, GO TO	
40	At the 1B MTC terminal, diagnose the Connecting Breakage TSI Frame Controller 1 by entering: **DGN:TSI x,CONTR 1!** where *x* = TSI Member Number (0-63) Response: The screen returns an output message with REMOVE COMPLETE, then ATP for tests run.	Telco/Inst	—
41	At the 1B MTC terminal, restore TSI x, Controller 1 by entering: **RST:TSI x,CONTR 1!** where *x* = TSI Member Number (0-63) Response: The screen returns an output message with ATP for all tests run, then RESTORE COMPLETE.	Telco/Inst	—
42	Power-down the disk pair(s) associated with the SCU by pressing the **OFF** button on the Disk Power Controller (DPC) UN356 circuit pack(s) associated with the disk pair(s).	Inst	—
43	Power-down the SCU being degrown by pressing the **OFF** button on the SCU's TN1984 circuit pack.	Inst	—
44	Remove the degrown SCU reference from the ASM-Plus database, if applicable.	Telco/Inst	—
45	If the entire SCS complex **is** being degrown, continue to Step 46. If the entire SCS complex **is not** being degrown, disconnect the optical cable between the optical cross-connect panel (OCCP) and the degrowth SCU backplane (horizontal equipment location 024) and install a fiber shorting contact (CC# 846832087, Ref. J4A024A-1 Issue 3 - Engineering Note #58) at the OCCP where the optical cable was removed.	Inst	—
46	Remove the fuses associated with the degrowth SCU. (See the labeling on the fuse panel cover for fuse locations and sizes.)	Inst	—
47	Degrowth of this SCU is now complete. With the exception of the LAN cable, cabling can now be disconnected. Circuit packs can now be removed from the degrown SCU and stored according to safe Electro-Static Discharge (ESD) procedures.	Inst	—
48	This is a **Safe Stop Point**. If stopping, perform Steps 49 and 50. Otherwise go to Step 52.	Telco/Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED		FOR DETAILS, GO TO	
49	At the 1B MTC terminal, allow REX by entering: **ALW:MACLI,CLASS MTCE!** Response: `AUTOMATIC JOB SCHEDULING RESUMED`	Telco	—
50	Stop procedure for now. Resume at Step 51 when continuing.	Telco/Inst	—
51	Perform Steps 2 through 4 and Steps 6 through 9 of this procedure. Then continue to the next step.	Telco/Inst	—
52	If this was the last SCU to be degrown, go to Step 53. If additional SCUs are to be degrown, go to Step 56.	Telco/Inst	—
53	If the entire SCS complex **is not** to be degrown, go to Step 54. If the entire SCS complex **is** to be degrown, go to Step 61. ***Caution: All SCUs must be degrown prior to member degrowth.***	Telco/Inst	—
54	At the 1B MTC terminal, allow REX by entering: **ALW:MACLI,CLASS MTCE!** Response: `AUTOMATIC JOB SCHEDULING RESUMED`	Telco	—
55	**Stop! You have completed this procedure.**	Telco/Inst	—
56	This is a **Safe Stop Point**. If stopping, perform Steps 57 and 58. Otherwise go to Step 60.	Telco/Inst	—
57	At the 1B MTC terminal, allow REX by entering: **ALW:MACLI,CLASS MTCE!** Response: `AUTOMATIC JOB SCHEDULING RESUMED`	Telco	—
58	Stop procedure for now. Resume at Step 59 when continuing.	Telco/Inst	—
59	Perform Steps 2 through 4 and Steps 6 through 9 of this procedure. Then continue to the next step.	Telco/Inst	—
60	Repeat Steps 28 through 48 for the next SCU to be degrown.	Telco/Inst	—
61	Degrow member equipage from SGRO to GROW using Recent Change Form 701.	Telco	DLP-537
62	This is a **Safe Stop Point**. If stopping, perform Steps 63 and 64. Otherwise go to Step 66.	Telco/Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
63	At the 1B MTC terminal, allow REX by entering: **ALW:MACLI,CLASS MTCE!** Response: `AUTOMATIC JOB SCHEDULING RESUMED`	Telco	—
64	Stop procedure for now. Resume at Step 65 when continuing.	Telco/Inst	—
65	Perform Steps 2 through 4 and Steps 6 through 9 of this procedure. Then continue to the next step.	Telco/Inst	—
66	Remove the degrown SCS complex from the PUB using TOP 234-153-045.	Telco/Inst	—
67	This is a **Safe Stop Point**. If stopping, perform Steps 68 and 69. Otherwise go to Step 71.	Telco/Inst	—
68	At the 1B MTC terminal, allow REX by entering: **ALW:MACLI,CLASS MTCE!** Response: `AUTOMATIC JOB SCHEDULING RESUMED`	Telco	—
69	Stop procedure for now. Resume at Step 70 when continuing.	Telco/Inst	—
70	Perform Steps 2 through 4 and Steps 6 through 9 of this procedure. Then continue to the next step.	Telco/Inst	—
71	Degrow member equipage from GROW to UNEQ using Recent Change Form 701.	Telco	DLP-538
72	Power-down the SCS complex: 1. At IPUB 0 and 1, simultaneously press the **OFF** and **MOR** buttons on the Integrated Power Controller (IPC) TN1671 circuit pack. 2. At SCC 0 and 1, simultaneously press the **OFF** and **MOR** buttons on the Master Power Controller TN1984 circuit pack.	Inst	—
73	Disconnect/defuse the power between the Power Distribution Frame (PDF) and the degrown SCS frame.	Inst	—
74	This is a **Safe Stop Point**. If stopping, perform Steps 75 and 76. Otherwise go to Step 78, being sure to read the heading and note above Step 78.	Telco/Inst	—
75	At the 1B MTC terminal, allow REX by entering: **ALW:MACLI,CLASS MTCE!** Response: `AUTOMATIC JOB SCHEDULING RESUMED`	Telco	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
76	Stop procedure for now. Resume at Step 77 when continuing.	Telco/Inst	—
77	Perform Steps 2 through 4 and Steps 6 through 9 of this procedure. Then continue to the next step.	Telco/Inst	—
	REROUTING OF ASM-PLUS TO SCS LAN CONNECTION ***Note:*** If the switch has more than one SCS complex, the LAN cable must be rerouted prior to removing the degrown SCS complex from the lineup. **Steps 78 through 82 should be completed only if the ASM-Plus is present and active and the LAN is connected. If these conditions do not apply, go to Step 83.**		
78	Inhibit the LAN by entering the following input message at the 1B MTC terminal: **INH:SCS 0,LAN!** Response: The screen returns `Code 091` followed by `INH:SCS 0, LAN`	Telco/Inst	—
79	Re-route the LAN cable to remove the degrown SCS complex from the series LAN connection. This daisy-chain connection exists between all SCS complexes and the ASM-Plus. **If removing an SCS complex from the end of a lineup**, remove the LAN terminator at the end of the last SCS complex (the one being degrown). Then, remove the LAN cable from the last remaining SCS complex to the degrowth SCS complex and insert the LAN terminator at the end of the last remaining SCS complex. **If removing an SCS complex from within a lineup**, interrupt the LAN cable between the degrowth SCS complex and the remaining SCS complexes. Then connect the LAN cable directly between the remaining SCS complexes.	Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
	LAN CONTINUITY CHECK ***Note:*** For proper LAN functionality there must be continuity between the LAN Terminator at the ASM-Plus and the LAN Terminator located at the highest member number SCS complex (all other complexes being in between).		
80	At the 1B MTC terminal, enter: **DGN:SCS *x*,SCU *y*:PH 10!** where *x* = First LAN-connected SCS Member Number (0-7) (which contains SCU *y*) *y* = Lowest number SCU (0-15) connected to the LAN Response: `RMV SCS x SCU y COMPL,` `DGN SCS x SCS y COMPL ATP` ***Note:*** This diagnostic phase checks LAN continuity for all SCS complexes. If Phase 10 diagnostics fail, appropriate action should be taken to find the "open" in the daisy-chained LAN.	Telco/Inst	—
81	At the 1B MTC terminal, restore the SCU by entering: **RST:SCS *y*,SCU *z*!** where *x* = First LAN-connected SCS Member Number (0-7) (which contains SCU *y*) *y* = Lowest numbered SCU (0-15) connected to the LAN Response: `ATP` `RST:SCS x, SCU y COMPL`	Telco/Inst	—
82	Enable the LAN by entering the following message at the 1B MTC terminal: **ALW:SCS 0,LAN!** Response: The screen returns `Code 091` followed by `ALW:SCS 0,LAN`	Telco/Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED		**FOR DETAILS, GO TO**	
83	At the 1B MTC terminal, allow REX by entering: **ALW:MACLI,CLASS MTCE!** Response: `AUTOMATIC JOB SCHEDULING RESUMED`	Telco	—
84	The degrowth procedure is complete. All cables and leads (scan points, Schematic Drawing [SD] points, etc.) can now be disconnected from the degrown SCS frame. Also, the degrown SCS frame can be removed from the frame lineup.	Inst	—

Update Service Circuit System (SCS) System Files

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
	4ESS™ SWITCH OFFICE PRELIMINARY CHECK		
1	Ensure that within the last 24 hours the Processor has not experienced any TTY terminal suspends, bootstraps, diagnostic failures, or overloads.	Telco	—
2	Ensure that disks and Input/Output Processors (IOPs) are in duplex and that 3B Control Units (CUs) are in ACTIVE-STANDBY mode. Routine Exercise (REX) and the Peripheral Unit System Exerciser should be disabled, and should be inhibited during SCS file update. This is accomplished by entering the following: 1. **INH:MACLI,CLASS MTCE;REX!** Response: `MACLI,CLASS MTCE INHIBITED` 2. **STOP:TEST;PUSYS!** Response: `OK`	Telco	—
3	Ensure that diagnostics on the duplexed 3B CUs have been run to completion within the last 24 hours.	Telco	—
4	Ensure that the SCS complex being updated is in service, operating in duplex, and has run all automatic and demand diagnostics to completion within the last 24 hours. **All** Service Circuit Units (SCUs) and associated disk pairs (including those that are out of service) should be powered up.	Telco	—
5	Ensure that either the appropriate SCS Broadcast Warning Message (BWM) has been applied or the 3B retrofit has been completed, as applicable.	Telco	—
	SOURCE VERSION NUMBER (SVN) AND DESTINATION VERSION NUMBER (DVN) DETERMINATION ***Note:*** The SVN/DVN numbers ensure that a particular SCS system file is read from the 3B20D and written to the disk pairs at the proper disk locations. An SVN (the correct and up-to-date file location on the 3B20D disk) and a DVN (the next location on the appropriate disk pair 0) is required for each of the 7 SCS System File Types to be updated (SCCSFT, SCUOPR, SCUDGN, MSPFIX, MSPROV, and TONES). The SVN will always be "0". The DVN is determined through translations.		

DO THE ITEMS BELOW IN THE ORDER LISTED		**FOR DETAILS, GO TO**	
6	Verify the DVN for all seven system file types to be updated.	Telco	DLP-526
	UPDATE SCS SYSTEM FILES FROM THE ATTACHED PROCESSOR SYSTEM (APS) USING THE COPY COMMAND ***Note:*** The purpose of the **COPY** message is to perform an APS to SCU file copy. One **COPY** message must be used for each file type being copied from the APS to the Hard Disk Unit (HDU). Both the SVN and DVN are needed for each **COPY** message. These numbers ensure that a particular file type is read from and written to the proper disk locations. The DVNs from Table A in DLP-526 will be used in the **COPY** messages.		
7	At the 1B MTC terminal, write the SCS system files from the APS to the HDUs by entering the following messages: **COPY:SCS** *x*,**SCCSFT,SVN 0,DVN** *y*,**ALL; UCL!** **COPY:SCS** *x*,**SCUOPR,SVN 0,DVN** *y*,**ALL; UCL!** **COPY:SCS** *x*,**SCUDGN,SVN 0,DVN** *y*,**ALL; UCL!** **COPY:SCS** *x*,**MSPFIX,SVN 0,DVN** *y*,**ALL; UCL!** **COPY:SCS** *x*,**MSPROV,SVN 0,DVN** *y*,**ALL; UCL!** **COPY:SCS** *x*,**TONES,SVN 0,DVN** *y*,**ALL; UCL!** where *x* = SCS Member Number (0-7) *y* = Destination Version Number (0-3). (Use the number from the "DVN" column of Table A in DLP-526.) *ALL* indicates that the specified file is to be copied to all SCSs. *UCL* forces files to be copied to out-of-service SCUs and to SCSs in the "GROW" state. ***Note:*** Each of the above copy commands could take a considerable amount of time to run. Response: `COPY:SCS` *x* `TASK COMPLETED` (for each of the above commands)	Telco	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
	SERVICE CIRCUIT UNIT UPDATE ***Note:*** Steps 8 through 10 must be completed for each SCU as applicable. Step 11 should be completed only for the first SCU being updated.		
8	If the SCU is in service, take the unit out of service by entering the following message at the 1B MTC terminal: **RMV:SCS** *a*,**SCU** *b*! where *a* = Member Number (0-7) *b* = SCU Number (0-15) Response: PF followed by RMV:SCS *a*, SCU *b*, COMPL ***Note:*** This **RMV** (remove) could take up to 2 minutes.	Telco	—
9	Update the version number of the SCU and associated Multifaceted Signal Processor (MSP) using RC form 703.	Telco	DLP-528
10	If this SCU was in service prior to being updated, restore the SCU by entering the following message at the 1B MTC terminal: **RST:SCS** *x*,**SCU** *z*! where *x* = Member Number (0-7) *z* = SCU Number (0-15) Response: ATP RST:SCS *x*, SCU *z* COMPL where *x* = Member Number (0-7) *z* = SCU Number (0-15) ***Note:*** If the proper response is not received, use RC form 703 to return to the original version number, **stop the update**, and contact the appropriate *4ESS* switch support organization to report this failure.		

DO THE ITEMS BELOW IN THE ORDER LISTED		FOR DETAILS, GO TO	
11	If this is the first SCU being updated, soak the SCU for 24 hours. ***Note:*** The soak interval is used to verify system operation and stability. During the soak interval, all abnormal conditions must be investigated and resolved immediately. Equipment being soaked must be error free for at least the time specified.	Telco	—
12	This is a **Safe Stop Point**. If stopping, perform Steps 13 and 14. Otherwise go to Step 16.	Telco/Inst	—
13	At the 1B MTC terminal, allow REX by entering: **ALW:MACLI,CLASS MTCE!** Response: `AUTOMATIC JOB SCHEDULING RESUMED`	Telco	—
14	Stop procedure for now. Resume at Step 15 when continuing.	Telco/Inst	—
15	Perform Steps 1 through 5 of this procedure. Then continue to the next step.	Telco/Inst	—
16	Ensure that Steps 8 through 10 have been completed for each SCU, as applicable.	Telco	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
	SERVICE CIRCUIT CONTROLLER UPDATE		

17	***Note:*** The purpose of the **UPD** (update) message is to replace the present software version in both SCS Controllers with another software version. Once the first controller is updated, the second controller is then automatically updated. The SCS complex must be operating in duplex to accomplish this update.
	
	At the 1B MTC terminal, enter:
	
	UPD:SCS *a*,**CONTR** *b*,**SVN** *c*!
	
	where *a* = SCS Member Number (0-7)
	b = SCS Controller Number being loaded with the new software (0 or 1)
	c = Source Version Number on the SCU disk (0-3). (Use the number for the SCCSFT file from the "DVN" column of Table A in DLP-526.)
	
	Response: Several output messages as follows:
	`UDP:SCS a CONTR UPDATE STARTED`
	`UDP:SCS a CONTR b PUMP IN PROGRESS`
	`UDP:SCS a CONTR b SWITCH IN PROGRESS`
	`UDP:SCS a CONTR UPDATE COMPLETED`
	
	where *a* = SCS Member Number (0-7)
	b = SCS Controller Number (0 or 1)
		Telco	—

18	Soak the system for 24 hours. ***Note:*** The soak interval is used to verify system operation and stability. During the soak interval, all abnormal conditions must be investigated and resolved immediately. Equipment being soaked must be error free for at least the time specified. After ensuring that the SCS complex has not experienced a controller pump from disk, continue to Step 19.	Telco	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
19	This is a **Safe Stop Point**. If stopping, perform Steps 20 and 21. Otherwise go to Step 23.	Telco/Inst	—
20	At the 1B MTC terminal, allow REX by entering: **ALW:MACLI,CLASS MTCE!** Response: `AUTOMATIC JOB SCHEDULING RESUMED`	Telco	—
21	Stop procedure for now. Resume at Step 22 when continuing.	Telco/Inst	—
22	Perform Steps 1 through 5 of this procedure. Then continue to the next step.	Telco/Inst	—
23	Update the version number in the SCS translator for both controllers using RC form 801.	Telco	DLP-527
24	At the 1B MTC terminal, diagnose Controller 0 by entering: **DGN:SCS *x*,CONTR 0!** where *x* = SCS Member Number (0-7) Response: The screen returns output messages with `ATP` for each requested phase. ***Note:*** If the proper response is not received, use DLP-515 to return to the original version number, **stop the update**, and contact the appropriate *4ESS* switch support organization to report this failure.	Telco	—
25	At the 1B MTC terminal, restore SCS Controller 0 by entering: **RST:SCS *x*,CONTR 0!** where *x* = SCS Member Number (0-7) Response: The screen returns an output message with `CATP`, then `RESTORE COMPLETE`. Bit **19** (4E18) or bit **21** (4E19 and later) should be **set** in the CATP **reason word** indicating that the unused EBI link test skipped. This is the only allowable exception (no other bits in the CATP reason word should be set).	Telco	—

DO THE ITEMS BELOW IN THE ORDER LISTED		FOR DETAILS, GO TO	
26	At the 1B MTC terminal, diagnose Controller 1 by entering: **DGN:SCS *x*,CONTR 1!** where *x* = SCS Member Number (0-7) Response: The screen returns output messages with ATP for each requested phase. ***Note:*** If the proper response is not received, use DLP-515 to return to the original version number, **stop the update**, and contact the appropriate *4ESS* switch support organization to report this failure.	Telco	—
27	At the 1B MTC terminal, restore SCS Controller 1 by entering: **RST:SCS *x*,CONTR 1!** where *x* = SCS Member Number (0-7) Response: The screen returns an output message with CATP, then RESTORE COMPLETE. Bit **19** (4E18) or bit **21** (4E19 and later) should be **set** in the CATP **reason word** indicating that the unused EBI link test skipped. This is the only allowable exception (no other bits in the CATP reason word should be set).	Telco	—
28	At the 1B MTC terminal, allow REX by entering: **ALW:MACLI,CLASS MTCE!** Response: AUTOMATIC JOB SCHEDULING RESUMED	Telco	—

Add Service Circuit Unit(s)

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
	***4ESS*™ SWITCH OFFICE PRELIMINARY CHECK**		
1	Ensure that the *4ESS* switch is currently running in 4E18 R3/AP12 Generics or later.	Telco	—
2	Ensure that within the last 24 hours the Processor has not experienced any TTY terminal suspends, bootstraps, diagnostic failures, or overloads.	Telco	—
3	Ensure that the AT&T 3B20 APS system, the APIs, and the 1B Processor are in the duplex mode, and that the 3B Control Units (CUs) are in ACTIVE-STANDBY mode. Routine Exercise (REX) and the Peripheral Unit System Exerciser (PUSYS) should be disabled, and should remain disabled during the entire growth process. This is accomplished by entering the following at the 1B Maintenance (MTC) terminal: 1. **INH:MACLI,CLASS MTCE;REX!** Response: `MACLI,CLASS MTCE INHIBITED AUTOMATIC JOB SCHEDULING DISALLOWED` 2. **STOP:TEST;PUSYS!** Response: `OK`	Telco	—
4	Ensure that diagnostics on the duplexed 3B CUs have been run to completion within the last 24 hours.	Telco	—
5	Ensure that the SCS growth complex is in service, operating in duplex, and has run diagnostics to completion within the last 24 hours.	Telco	—
6	Ensure that all processor and/or system problems have been cleared before growth activity begins.	Telco	—
7	Ensure that no Software Updates (SUs)/Broadcast Warning Messages (BWMs) for SCS system files are applied during SCS growth.	Telco	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
8	Ensure that the ASM-Plus/SCS LAN connection is present and active, if applicable.	Telco	—
9	Check office records/Telephone Equipment Order (TEO) to confirm the following for each growth SCU/disk pair: • Type of Service Circuit (000-111) • Disk Capacity - Translator (0-3) • Announcement Set (A-Z) • Optional MSP Circuit Pack (1, 2, and/or 3) Retain this information for future use in this procedure.	Telco/Inst	—
10	Verify the SCS Unit Type (UT) Translator and compare the SCU Subunit Data **for each growth SCU** against office records/requirements (PTAGS). Also compare each growth SCU to Breakage TSI Port assignment against office wiring records. Similarly, check that all translation information matches the growth SCU's hardware. The SCU Subunit Data and the associated Breakage TSI Port assignments are contained in the three words specified by the SCS UT Translator for each SCU. ***Note:*** This verify must be done separately for each growth SCU beginning with the lowest-numbered SCU.	Telco/Inst	DLP-534
11	Verify the associated Breakage TSI UT Translator(s) and compare the assignment/equipage of the TSI Port to each growth SCU against office wiring records (PTAGS).	Telco/Inst	DLP-516
12	Ensure that diagnostics on the associated Breakage Time Slot Interchange (TSI) Frames have been run to completion within the last 24 hours.	Telco	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
	4ESS SWITCH TO SERVICE CIRCUIT SYSTEM PRELIMINARY INTERCONNECT		
13	Ensure that all Scan Point and Signal Distributor (SD) Point connections from the growth SCU(s) to the *4ESS* switch Signal Processor (SP) are completed.	Inst	—
14	Ensure that the alarm connection from the growth SCU(s) to the *4ESS* switch Power Alarm Grid is completed.	Inst	—
15	Ensure that the DS-120 cable(s) from the growth SCU(s) to the associated Breakage TSI Ports have been set in place but **not connected**.	Inst	—
16	Ensure that the fiber-optic ribbon cable(s) are present at the rear of the SCU cabinet. This cable should be connected at the backplane of the growth SCU(s), but **not** at the Optical Cross-Connect Panel.	Inst	—
17	Ensure that the Local Area Network (LAN) cable(s) for the growth SCU(s) are in place at the rear of the SCU cabinet. These cables should be daisy-chained between all SCUs and terminated at both ends.	Inst	—
18	Ensure that the Small Computer System Interface (SCSI) Bus Cables for the disk pair(s) associated with the growth SCU(s) are in place at the rear of the SCU cabinet.	Inst	—
19	Ensure that the Active/Standby cable(s) from the growth SCU(s) to all other SCUs are properly connected. These cables are daisy-chained between all SCUs.	Inst	—
20	If the first SCU of SCUs 8-15 is being grown, go to Step 21. If one of the SCUs 8-15 is already in service or if none of the SCUs 8-15 are being grown, go to Step 34.	Inst	—
21	At the Optical Cross-Connect Panel (OCCP), install Fiber Shorting Contacts (CC# 846832087) at connector locations for SCUs 8-15.	Inst	—
22	At the 1B MTC terminal, remove one Service Circuit Controller (SCC) from service by entering: **RMV:SCS** *a*,**CONTR** *b*! where *a* = Member Number (0-7) *b* = SCC Number (0 or 1) Response: PF followed by: `RMV:SCS a,CONTR b COMPL`	Telco	—

DO THE ITEMS BELOW IN THE ORDER LISTED			**FOR DETAILS, GO TO**
23	Power-down the out-of-service SCC: 1. At the IPUB associated with the SCC, press the **OFF** button on the TN1671 circuit pack. 2. At the SCC, press the **OFF** button on the TN1984 circuit pack.	Inst	—
24	Install circuit packs at the out-of-service SCC. 1. At horizontal EQL 016 of the SCC, install a 410AA Power Converter circuit pack. 2. At horizontal EQL 056 of the SCC, install a KCN3 Extended Bus Interface circuit pack.	Inst	—
25	Power-up the out-of-service SCC: 1. At the IPUB associated with the SCC, press the **ON** button on the TN1671 circuit pack. 2. At the SCC, press the **ON** button on the TN1984 circuit pack.	Inst	—
26	At the 1B MTC terminal, diagnose the out-of-service SCC by entering: **DGN:SCS** *x*,**CONTR** *y*! where *x* = Member Number (0-7) *y* = SCC Number (0 or 1) Response: The screen returns an output message with ATP.	Telco	—
27	At the 1B MTC terminal, restore the out-of-service SCC to service by entering: **RST:SCS** *a*,**CONTR** *b*! where *a* = Member Number (0-7) *b* = SCC Number (0 or 1) Response: The screen returns an output message with CATP, then RESTORE COMPLETE. Bit **19** (4E18/4E19) or bit **21** (4E20 and later) will be **set** in the CATP **reason word** (unless the SCS is equipped with one or more SCUs in the SCU8 to SCU15 range), indicating that the unused EBI link test skipped. This is the only allowable exception (no other bits in the CATP reason word should be set).	Telco	—

DO THE ITEMS BELOW IN THE ORDER LISTED		FOR DETAILS, GO TO	
28	At the 1B MTC terminal, remove the other Service Circuit Controller (SCC) from service by entering: **RMV:SCS** *a*,**CONTR** *b*! where *a* = Member Number (0-7) *b* = SCC Number (0 or 1) Response: PF followed by: RMV:SCS *a*, CONTR *b* COMPL	Telco	—
29	Power-down the out-of-service SCC: 1. At the IPUB associated with the SCC, press the **OFF** button on the TN1671 circuit pack. 2. At the SCC, press the **OFF** button on the TN1984 circuit pack.	Inst	—
30	Install circuit packs at the out-of-service SCC. 1. At horizontal EQL 016 of the SCC, install a 410AA Power Converter circuit pack. 2. At horizontal EQL 056 of the SCC, install a KCN3 Extended Bus Interface circuit pack.	Inst	—
31	Power-up the out-of-service SCC: 1. At the IPUB associated with the SCC, press the **ON** button on the TN1671 circuit pack. 2. At the SCC, press the **ON** button on the TN1984 circuit pack.	Inst	—
32	At the 1B MTC terminal, diagnose the out-of-service SCC by entering: **DGN:SCS** *x*,**CONTR** *y*! where *x* = Member Number (0-7) *y* = SCC Number (0 or 1) Response: The screen returns an output message with ATP.	Telco	—

DO THE ITEMS BELOW IN THE ORDER LISTED		FOR DETAILS, GO TO	
33	At the 1B MTC terminal, restore the out-of-service SCC to service by entering: **RST:SCS** *a*,**CONTR** *b*! where *a* = Member Number (0-7) *b* = SCC Number (0 or 1) Response: The screen returns an output message with CATP, then RESTORE COMPLETE. Bit **19** (4E18/4E19) or bit **21** (4E20 and later) will be **set** in the CATP **reason word** (unless the SCS is equipped with one or more SCUs in the SCU8 to SCU15 range), indicating that the unused EBI link test skipped. This is the only allowable exception (no other bits in the CATP reason word should be set).	Telco	—
34	This is a **Safe Stop Point**. If stopping, perform Steps 35 and 36. Otherwise go to Step 38.	Telco/Inst	—
35	At the 1B MTC terminal, allow REX by entering: **ALW:MACLI,CLASS MTCE!** Response: AUTOMATIC JOB SCHEDULING RESUMED	Telco	—
36	Stop procedure for now. Resume at Step 37 when continuing.	Telco/Inst	—
37	Perform Steps 1 through 8 of this procedure. Then continue to the next step.	Telco/Inst	—
	CIRCUIT PACK INSTALLATION FOR GROWTH SCU(S) AND ASSOCIATED DISK PAIR(S) ***Note:*** Steps 38 through 44 should be completed for each growth SCU, beginning with the lowest-numbered growth SCU. These steps should be completed in their entirety for each growth SCU before continuing with the next growth SCU.		
38	Verify that fuses are installed in the Fuse and Filter Unit for the growth SCU and associated disk pair(s). (See the labeling on the fuse panel cover for fuse locations and sizes.)	Inst	—
39	Install circuit packs in the growth SCU and associated Hard Disk Unit (HDU).	Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
40	This is a **Safe Stop Point**. If stopping, perform Steps 41 and 42. Otherwise go to Step 44.	Telco/Inst	—
41	At the 1B MTC terminal, allow REX by entering: **ALW:MACLI,CLASS MTCE!** Response: `AUTOMATIC JOB SCHEDULING RESUMED`	Telco	—
42	Stop procedure for now. Resume at Step 43 when continuing.	Telco/Inst	—
43	Perform Steps 1 through 8 of this procedure. Then continue to the next step.	Telco/Inst	—
44	Power-up the growth SCU and associated disk pair(s). 1. At the growth Hard Drive Unit(s), press the **ON** button to power the Disk Power Controller (DPC) UN356 circuit pack. ***Note:*** Wait at least 60 seconds before proceeding with the next step. This allows the disk drives to spin up to operational speed. 2. At the growth SCU, press the **ON** button to power the Master Power Controller (MPC) TN1984 circuit pack.	Inst	—
45	Have Steps 38-44 been completed for all growth SCUs? If **Yes**, continue to Step 46. If **No**, repeat Steps 38-44 for the next growth SCU.	Inst	—
	SCS-RELATED TSI GROWTH ***Note:*** Steps 46 through 62 should be completed for each growth SCU, beginning with the lowest-numbered growth SCU. These steps should be completed in their entirety for each growth SCU before continuing with the next growth SCU.		
46	Recent change and verify the associated breakage TSI submember equipage from UNEQ to GROW using RC form 700.	Telco	DLP-506

DO THE ITEMS BELOW IN THE ORDER LISTED			**FOR DETAILS, GO TO**
47	Recent change and verify the associated breakage TSI submember equipage from GROW to SGRO using RC form 700.	Telco	DLP-507
48	This is a **Safe Stop Point**. If stopping, perform Steps 49 and 50. Otherwise go to Step 52, being sure to read the heading above Step 52.	Telco/Inst	—
49	At the 1B MTC terminal, allow REX by entering: **ALW:MACLI,CLASS MTCE!** Response: `AUTOMATIC JOB SCHEDULING RESUMED`	Telco	—
50	Stop procedure for now. Resume at Step 51 when continuing.	Telco/Inst	—
51	Perform Steps 1 through 8 of this procedure. Then continue to the next step.	Telco/Inst	—
	SCU AND ASSOCIATED DISK PAIR GROWTH		
52	At the Optical Cross-Connect Panel (OCCP), remove the growth SCU(s) Fiber Shorting Contacts (CC# 846832087) and connect the associated fiber-optic ribbon cable (see J4A024A-1, Issue 3).	Inst	—
53	Recent change and verify growth SCU equipage from UNEQ to GROW using RC form 700.	Telco	DLP-502
54	Recent change and verify associated disk pair and MSP equipage from UNEQ to GROW using RC form 703.	Telco	DLP-503
55	At the 1B MTC terminal, diagnose the growth SCU and associated disk pair using Phases 1-7 by entering: **DGN:SCS *x*,SCU z:PH 1-7!** where *x* = Member Number (0-7) *z* = Submember Number (0-15) Response: The screen returns output messages with `ATP` for each requested phase.	Telco/Inst	—
56	Recent change and verify growth SCU equipage from GROW to SGRO using RC form 700.	Telco	DLP-504
57	Recent change and verify associated disk pair and MSP equipage from GROW to SGRO using RC form 703.	Telco	DLP-505

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
58	At the 1B MTC terminal, diagnose the growth SCU and associated disk pair using Phases 1-7 by entering: **DGN:SCS** *x*,**SCU** *z*:**PH 1-7!** where *x* = Member Number (0-7) *z* = Submember Number (0-15) Response: The screen returns output messages with ATP for each requested phase.	Telco/Inst	—
59	At the 1B MTC terminal, diagnose SCS Controller 0 by entering: **DGN:SCS** *x*,**CONTR 0!** where *x* = Member Number (0-7) Response: The screen returns an output message with ATP.	Telco/Inst	—
60	At the 1B MTC terminal, restore SCS Controller 0 by entering: **RST:SCS** *x*,**CONTR 0!** where *x* = Member Number (0-7) Response: The screen returns an output message with CATP, then RESTORE COMPLETE. Bit **19** (4E18/4E19) or bit **21** (4E20 and later) will be **set** in the CATP **reason word** (unless the SCS is equipped with one or more SCUs in the SCU8 to SCU15 range), indicating that the unused EBI link test skipped. This is the only allowable exception (no other bits in the CATP reason word should be set).	Telco/Inst	—
61	At the 1B MTC terminal, diagnose SCS Controller 1 by entering: **DGN:SCS** *x*,**CONTR 1!** where *x* = Member Number (0-7) Response: The screen returns an output message with ATP.	Telco/Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
62	At the 1B MTC terminal, restore SCS Controller 1 by entering: **RST:SCS *x*,CONTR 1!** where *x* = Member Number (0-7) Response: The screen returns an output message with `CATP`, then `RESTORE COMPLETE`. Bit **19** (4E18/4E19) or bit **21** (4E20 and later) will be **set** in the CATP **reason word** (unless the SCS is equipped with one or more SCUs in the SCU8 to SCU15 range), indicating that the unused EBI link test skipped. This is the only allowable exception (no other bits in the CATP reason word should be set).	Telco/Inst	—
63	This is a **Safe Stop Point**. If stopping, perform Steps 64 and 65. Otherwise go to Step 67.	Telco/Inst	—
64	At the 1B MTC terminal, allow REX by entering: **ALW:MACLI,CLASS MTCE!** Response: `AUTOMATIC JOB SCHEDULING RESUMED`	Telco	—
65	Stop procedure for now. Resume at Step 66 when continuing.	Telco/Inst	—
66	Perform Steps 1 through 8 of this procedure. Then continue to the next step.	Telco/Inst	—
67	Have Steps 46-62 been completed for all growth SCUs? If **Yes**, continue to Step 68. If **No**, repeat Steps 46-63 for the next growth SCU.	Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
	DOWNLOADING OF SCS SYSTEM FILES FROM THE ATTACHED PROCESSOR SYSTEM (APS) ***Note:*** The downloading of the SCS system files is accomplished via the COPY command. This command is used once for each of the SCS System File Types: TONES, SCCSFT, SCUOPR, SCUDGN, MSPROV, and MSPFIX. These files reside in the /scs directory of the 3B20D computer and may have up to four vintages of files labeled 0-3. Both a Source Version Number (SVN) (the correct and up-to-date file location on the 3B20D computer disk) and a Destination Version Number (DVN) (the next location on each Disk Pair 0) are needed for each COPY command. These numbers ensure that a particular SCS file type is read from and written to the proper disk location of each disk pair 0.		
68	Determine the latest SCS system file version numbers from an in-service disk pair.	Telco/Inst	DLP-545
69	Copy the correct and up-to-date SCS system files from the APS to all growth disk pair 0.	Telco/Inst	DLP-524
70	Update SCU/MSP version numbers in the SCS Unit Type Translator for **each growth SCU** using RC form 703.	Telco/Inst	DLP-544
71	At the 1B MTC terminal, diagnose **each** growth SCU and associated disk pair(s) by entering: **DGN:SCS** *a*,**SCU** *b*:**PH (1-10,***c***)!** where *a* = Member Number (0-7) *b* = SCU Number (0-15) *c* = Phase Number(s) for SCU MSP test: **12** for SCUs with MSP 0 **12-13** for SCUs with MSPs 0 and 1 **12-14** for SCUs with MSPs 0 through 2 **12-15** for SCUs with MSPs 0 through 3 Response: The screen returns output messages with ATP for each requested phase.	Telco/Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
	TN4000 SECOND DISK PACK INITIALIZATION		
	Note: Steps 72 through 76 should be completed only if TN4000 (4 Gb) circuit packs are being grown. Steps 72 through 76 must be completed for each growth SCU equipped with TN4000 circuit packs, beginning with the lowest-numbered growth SCU. These steps must be completed in their entirety for each applicable growth SCU before continuing with the next growth SCU. ***Caution: TN4000 circuit packs can only be installed in disk pair locations 0 and 2. (Only SCU 0 has the physical capacity for installing disk pairs in locations 1, 2, and 3.) See Table A at the end of this procedure for allowable TN4000 disk pair locations.***		
72	Are TN4000 circuit packs being grown in location 0? If **Yes**, continue to Step 73. If **No**, continue to Step 74.	Telco/Inst	—
73	At the 1B MTC terminal, perform a soft initialization of Disk Pair 1, by entering the commands given below. ***Note:*** When populating a Type 2 (TN4000 - 4 Gb) disk pair at an SCU Disk Pair 0 location in the SCS Unit Type translator, the adjacent location Disk Pair 1 will also be populated. In order to ensure proper operation, a Soft Initialization (TYP 1) on both Bus 0 and Bus 1 is necessary for Disk Pair 1. 1. **INIT:SCS *x*,SCU *y*,DSK 1,BUS 0,TYP 1!** where *x* = Member Number (0-7) *y* = Submember Number (0-15) Response: `INIT:SCS x, SCU y COMPLETE` 2. **INIT:SCS *x*,SCU *y*,DSK 1,BUS 1,TYP 1!** where *x* = Member Number (0-7) *y* = Submember Number (0-15) Response: `INIT:SCS x, SCU y COMPLETE`	Telco/Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
74	Are TN4000 circuit packs being grown in location 2? If **Yes**, continue to Step 75. If **No**, continue to Step 76.	Telco/Inst	—
75	At the 1B MTC terminal, perform a soft initialization of SCU 0, Disk Pair 3, by entering the commands given below. ***Note:*** When populating a Type 2 (TN4000 - 4 Gb) disk pair at the SCU 0, Disk Pair 2 location in the SCS Unit Type translator, the adjacent location Disk Pair 3 will also be populated. In order to ensure proper operation, a Soft Initialization (TYP 1) on both Bus 0 and Bus 1 is necessary for Disk Pair 3. 1. **INIT:SCS *x*,SCU 0,DSK 3,BUS 0,TYP 1!** where *x* = Member Number (0-7) Response: `INIT:SCS x, SCU 0 COMPLETE` 2. **INIT:SCS *x*,SCU 0,DSK 3,BUS 1,TYP 1!** where *x* = Member Number (0-7) Response: `INIT:SCS x, SCU 0 COMPLETE`	Telco/Inst	—
76	Have Steps 72-75 been completed for all applicable growth SCUs? If **Yes**, continue to Step 77. If **No**, repeat Steps 72-75 for the next applicable growth SCU.	Telco/Inst	—
77	This is a **Safe Stop Point**. If stopping, perform Steps 78 and 79. Otherwise go to Step 81.	Telco/Inst	—
78	At the 1B MTC terminal, allow REX by entering: **ALW:MACLI,CLASS MTCE!** Response: `AUTOMATIC JOB SCHEDULING RESUMED`	Telco	—
79	Stop procedure for now. Resume at Step 80 when continuing.	Telco/Inst	—
80	Perform Steps 1 through 8 of this procedure. Then continue to the next step.	Telco/Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
	ACTIVATE GROWTH SCU(S) AND ASSOCIATED DISK PAIR(S)		
	Note: Steps 81 through 98 should be completed for each growth SCU, beginning with the lowest-numbered growth SCU. These steps should be completed in their entirety for each growth SCU before continuing with the next growth SCU.		
81	At the 1B MTC terminal, apply port pest to the associated breakage TSI port by entering: **INH:TSI** *x*,**SPC** *y*,**PORT** *z*! where *x* = TSI Member Number (0-63) *y* = SPC within TSI (0-1) *z* = Port within SPC (0-6) Response: The input message is echoed when the pesting is done.	Telco	—
82	Remove the output looping cable/plug from the associated breakage TSI port. Then connect the DS-120 signal cables between the associated Breakage TSI port and the growth SCU.	Inst	—
83	At the 1B MTC terminal, diagnose the SCU and associated disk pair(s) using Phase 11 by entering: **DGN:SCS** *x*,**SCU** *z*:**PH 11!** where *x* = Member Number (0-7) *z* = Submember Number (0-15) Response: The screen returns an output message with ATP for Phase 11.	Telco/Inst	—
84	At the 1B MTC terminal, diagnose the Connecting Breakage TSI Frame Controller 0 by entering: **DGN:TSI** *x*,**CONTR 0:PH** *y*,**GROWTH!** where *x* = Member Number (0-63) *y* = 13 (for J4A001A) or 20 (for J4A001B) Response: The screen returns an output message with REMOVE COMPLETE, then ATP for all tests run.	Telco/Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
85	At the 1B MTC terminal, restore TSI x, Controller 0 by entering: **RST:TSI** *x*,**CONTR 0!** where *x* = Member Number (0-63) Response: The screen returns an output message with ATP for all tests run, then RESTORE COMPLETED.	Telco/Inst	—
86	At the 1B MTC terminal, diagnose the Connecting Breakage TSI Frame Controller 1 by entering: **DGN:TSI** *x*,**CONTR 1:PH** *y*,**GROWTH!** where *x* = Member Number (0-63) *y* = 13 (for J4A001A) or 20 (for J4A001B) Response: The screen returns an output message with REMOVE COMPLETE, then ATP for tests run.	Telco/Inst	—
87	At the 1B MTC terminal, restore TSI x, Controller 1 by entering: **RST:TSI** *x*,**CONTR 1!** where *x* = Member Number (0-63) Response: The screen returns an output message with ATP for all tests run, then RESTORE COMPLETED.	Telco/Inst	—
88	Recent change and verify connecting breakage TSI submember equipage from SGRO to OPER using RC form 700.	Telco	DLP-511
89	At the 1B MTC terminal, diagnose the growth SCU and associated disk pair using Phase 11 by entering: **DGN:SCS** *x*,**SCU** *z*:**PH 11!** where *x* = Member Number (0-7) *z* = Submember Number (0-15) Response: The screen returns an output message with ATP for Phase 11.	Telco/Inst	—
90	Recent change and verify the disk pair and MSP equipage of the growth SCU from SGRO to OPER using RC form 703.	Telco	DLP-509
91	Recent change and verify the growth SCU equipage from SGRO to OPER using RC form 700.	Telco	DLP-510
92	Verify alarms for the appropriate SCU(s) 0-15 and associated Disk Power Controllers.	Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
93	At the 1B MTC terminal, run a Peripheral Unit Status audit by entering: **AUD:PUSTAT!** Response: `MSG COMPL`	Telco/Inst	—
94	At the 1B MTC terminal, diagnose the growth SCU and associated disk pair(s) using demand phases of equipped disk pairs by entering the following input message: **DGN:SCS** *a*,**SCU** *b*:**PH** *c*-*d*! where *a* = Member Number (0-7) *b* = SCU Number (0-15) *c* = Beginning Phase Number (see Caution) *d* = Ending Phase Number (see Caution) ***Caution: For any SCU 0-15, if a Type 2 (4 Gb) disk pair is being diagnosed, Demand Phases 90, 91, 92, and 93 must be run sequentially within the same message. In addition, if a Type 2 disk pair is being grown in disk pair 2 location in SCU 0, Demand Phases 94, 95, 96, and 97 must be run sequentially in the same message. For Type 0 (422 Mb) and Type 1 (2 Gb) disk pairs, use the demand phases listed below:*** **90** and **91** for Disk Pair 0 **92** and **93** for Disk Pair 1 (SCU 0 only) **94** and **95** for Disk Pair 2 (SCU 0 only) **96** and **97** for Disk Pair 3 (SCU 0 only) Response: The screen returns output messages with `ATP` for all equipped disk pairs. ***Note:*** The number of phases in the input message depends on the number of disk pairs equipped. This DGN message takes approximately 10 minutes per phase.	Telco/Inst	—
95	If an **ASM-Plus is present and active**, go to Step 96. If an **ASM-Plus is not present**, go to Step 97.	Telco/Inst	—
96	Add the growth SCU to the ASM-Plus database, if applicable.	Telco/Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
97	With the **ROS** switch on the TN1984 circuit pack in the NORMAL position at the SCU, restore and initialize the SCU and associated disk pair by entering the following input message at the 1B MTC terminal: **RST:SCS** *x*,**SCU** *z*! where *x* = Member Number (0-7) *z* = Submember Number (0-15) Response: `ATP` `RESTORE COMPLETE`	Telco/Inst	—
98	At the growth Service Circuit Unit Cabinet (SCUC), toggle the SCU's **ROS** switch on the TN1984 circuit pack from NORMAL to ROS, then back to NORMAL. ***Note:*** This will remove the SCU from SERVICE. When switched back to NORMAL, the SCU will be diagnosed and successfully returned to SERVICE.	Inst	—
99	This is a **Safe Stop Point**. If stopping, perform Steps 100 and 101. Otherwise go to Step 103.	Telco/Inst	—
100	At the 1B MTC terminal, allow REX by entering: **ALW:MACLI,CLASS MTCE!** Response: `AUTOMATIC JOB SCHEDULING RESUMED`	Telco	—
101	Stop procedure for now. Resume at Step 102 when continuing.	Telco/Inst	—
102	Perform Steps 1 through 8 of this procedure. Then continue to the next step.	Telco/Inst	—
103	Have Steps 81-98 been completed for all growth SCUs? If **Yes**, **STOP! THIS PROCEDURE IS COMPLETE**. If **No**, repeat Steps 81-99 for the next growth SCU.	Telco/Inst	—

TABLE A Allowable Disk Pair Configurations When Using Type 2 (TN4000) Circuit Packs With SCU 0

Allowable Disk Pair Types			
Location 0	**Location 1**	**Location 2**	**Location 3**
2	X		
2	X	0	
2	X	0	0
2	X	1	
2	X	0	1
2	X	1	0
0	0	2	X
0	1	2	X
1	0	2	X
Where "X" indicates disk pair locations that **must be unpopulated**.			

Increase Disk Pair Capacity for Service Circuit Unit (SCU) 0, Disk Pair 0 From Type 0 or Type 1 to Type 2

Note: This procedure is designed to increase disk pair capacity for SCU 0, Disk Pair 0 from a Type 0 (422 Mb) or Type 1 (2 Gb) to a Type 2 (4 Gb) within a SCS Complex. This procedure assumes that SCU 0 is operational and in service and that the announcement set and appropriate trunking are stable and will remain unchanged.

DO THE ITEMS BELOW IN THE ORDER LISTED		FOR DETAILS, GO TO	
1	Ensure that all responsible parties and organizations are aware of this activity before it starts. The appropriate *4ESS* switch support organizations must be contacted for instructions and/or assistance prior to this activity.	Telco	—
2	Ensure that within the last 24 hours the Processor has not experienced any TTY terminal suspends, bootstraps, diagnostic failures, or overloads.	Telco	—

3	Ensure that disks and Input/Output Processors (IOPs) are in duplex and that 3B Control Units (CUs) are in ACTIVE-STANDBY mode. Routine Exercise (REX) and the Peripheral Unit System Exerciser (PUSYS) should be inhibited, during this activity. This is accomplished by entering the following at the 1B Maintenance (MTC) terminal:
	
	1. **INH:MACLI,CLASS MTCE;REX!**
	
	Response: `MACLI,CLASS MTCE INHIBITED`
	`AUTOMATIC JOB SCHEDULING`
	`DISALLOWED`
	
	2. **STOP:TEST;PUSYS!**
	
	Response: `OK`
		Telco	—

4	Ensure that diagnostics on the duplexed 3B CUs have been run to completion within the last 24 hours.	Telco	—
5	Ensure that diagnostics of the appropriate SCS frame have been run to completion within the last 24 hours.	Telco	—
6	Ensure that diagnostics on the associated Breakage Time Slot Interchange (TSI) Frames have been run to completion within the last 24 hours.	Telco	—
7	Ensure that all processor and/or system problems have been cleared.	Telco	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
8	Ensure that no Software Updates (SUs)/Broadcast Warning Messages (BWMs) for SCS system files are applied during this activity.	Telco	—
9	Notify the TCC that an in-service SCU will be removed from service.	Telco	—
10	Ensure that the ASM-Plus/SCS LAN connection is present and active, if applicable.	Telco	—
	INSTALL TYPE 2 (TN4000) DISK PACKS INTO DISK PAIR 2 LOCATION		
11	At SCU 0 of the appropriate SCCC, toggle the **ROS** switch on the TN1984 circuit pack from NORMAL to ROS. This will remove SCU 0 from service. When the **OS** lamp goes ON, continue to the next step.	Telco	—
12	At the 1B MTC terminal, diagnose SCU 0 and associated disk pair(s) by entering: **DGN:SCS** *a*,**SCU 0:PH (1-10,***b***)!** where *a* = Member Number (0-7) *b* = Phase Number(s) for SCU MSP test: **12** for SCUs with MSP 0 (EQL 080) **12-13** for SCUs with MSPs 0 and 1 (EQL 072) **12-14** for SCUs with MSPs 0 through 2 (EQL 064) **12-15** for SCUs with MSPs 0 through 3 (EQL 056) Response: The screen returns output messages with CATP for each requested phase. Bit 5 will be set indicating that the Power Control switch is in the ROS position.	Telco/Inst	—
13	Power-down the disk pair(s) associated with SCU 0 by pressing the **OFF** button on the Disk Power Controller (DPC) UN356 circuit pack(s) associated with the disk pair(s).	Inst	—
14	Power-down SCU 0 by pressing the **OFF** button on the SCU's TN1984 circuit pack.	Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
15	Following all existing electrostatic discharge practices, install the TN4000 Hard Disk circuit packs and associated Disk Power Controller (DPC) UN356 circuit pack into the Disk Pair 2 location of the HDU (See Figure 1). ***Note:*** Retain the plastic inserts from circuit pack slots for later use.	Inst	—
16	Add disk pair capacity and equipage for Disk Pair 2 in the SCS Unit Type translator.	Telco/Inst	DLP-525
17	Power-up SCU 0 and associated disk pair(s). 1. At the associated disk pair(s), press the **ON** button to power the Disk Power Controller (DPC) UN356 circuit pack. ***Note:*** Wait at least 60 seconds before proceeding with the next step. This allows the disk drives to spin up to operational speed. 2. At SCU 0, press the **ON** button to power the Master Power Controller (MPC) TN1984 circuit pack.	Inst	—
18	At the 1B MTC terminal, diagnose SCU 0 and associated disk pair(s) by entering: **DGN:SCS** *a*,**SCU 0:PH (1-10,***b***)!** where *a* = Member Number (0-7) *b* = Phase Number(s) for SCU MSP test: **12** for SCUs with MSP 0 (EQL 080) **12-13** for SCUs with MSPs 0 and 1 (EQL 072) **12-14** for SCUs with MSPs 0 through 2 (EQL 064) **12-15** for SCUs with MSPs 0 through 3 (EQL 056) Response: The screen returns output messages with CATP for each requested phase. Bit 5 will be set indicating that the Power Control switch is in the ROS position.	Telco/Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
19	At the 1B MTC terminal, run a Peripheral Unit Status audit by entering: **AUD:PUSTAT!** Response: `MSG COMPL`	Telco/Inst	—
20	At the 1B MTC terminal, diagnose SCU 0 and associated Type 2 disk pair(s) by entering the following input message: **DGN:SCS** *a***,SCU 0:PH 94-97!** where *a* = Member Number (0-7) Response: The screen returns output messages with `ATP` for all equipped disk pairs. The number of phases in the input message depends on the number of disk pairs equipped. This DGN message takes approximately 10 minutes per phase.	Telco/Inst	—
21	This is a **Safe Stop Point**. If stopping, perform Steps 22 and 23. Otherwise go to Step 25.	Telco/Inst	—
22	At the 1B MTC terminal, allow REX by entering: **ALW:MACLI,CLASS MTCE!** Response: `AUTOMATIC JOB SCHEDULING RESUMED`	Telco	—
23	Stop procedure for now. Resume at Step 24 when continuing.	Telco/Inst	—
24	Perform Steps 2 through 8 of this procedure. Then continue to the next step.	Telco/Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
	PERFORM INTRA-SCU DISK COPY ***Note:*** An intra-SCU disk copy can only be performed when larger/equal capacity disks are copied to by smaller/equal capacity disks.		
25	At the 1B MTC terminal, do a disk copy from Disk Pair 0, Bus 0 to Disk Pair 2 by entering: **COPY:SCS *a*,SCU 0,SDP 0,BUS 0,DDP 2!** where *a* = Member Number (0-7) Response: `COPY:SCS a COMPLETED` ***Note:*** This intra-SCU disk copy will take a considerable amount of time. The time varies depending on the size of the disk being copied. An `IN PROGRESS` message will be displayed every 5 minutes during the copy. This copy will take approximately 20 minutes.	Telco	—
26	At the 1B MTC terminal, do a disk copy from Disk Pair 0, Bus 1 to Disk Pair 2, by entering: **COPY:SCS *a*,SCU 0,SDP 0,BUS 1,DDP 2!** where *a* = Member Number (0-7) Response: `COPY:SCS a COMPLETED` ***Note:*** This intra-SCU disk copy will take a considerable amount of time. The time varies depending on the size of the disk being copied. An `IN PROGRESS` message will be displayed every 5 minutes during the copy. This copy will take approximately 20 minutes.	Telco	—
27	Power-down the disk pair(s) associated with SCU 0 by pressing the **OFF** button on the Disk Power Controller (DPC) UN356 circuit pack(s) associated with the disk pair(s).	Inst	—
28	Power-down SCU 0 by pressing the **OFF** button on the SCU's TN1984 circuit pack.	Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
29	Is an intra-SCU disk copy to be performed on another disk pair? If **Yes**, go to Step 30. If **No**, go to Step 34.	Telco/Inst	—
30	Ensure that SCU 0 is powered down.	Inst	—
31	Following all existing electrostatic discharge practices, remove the existing TN4000 Hard Disk circuit packs at the SCU 0, Disk Pair 2 location (see Figure 1), and replace them with another pair of TN4000 Hard Disk circuit packs. Do **not** remove the UN356 DPC circuit pack.	Inst	—
32	Power-up SCU 0 and associated disk pair(s). 1. At the associated disk pair(s), press the **ON** button to power the Disk Power Controller (DPC) UN356 circuit pack. ***Note:*** Wait at least 60 seconds before proceeding with the next step. This allows the disk drives to spin up to operational speed. 2. At SCU 0, press the **ON** button to power the Master Power Controller (MPC) TN1984 circuit pack.	Inst	—
33	Repeat Steps 25 through 29.	Telco/Inst	—
34	Ensure that SCU 0 is powered down.	Inst	—
35	Following all existing electrostatic discharge practices, remove the Type 0 (TN1672) or Type 1 (TN1972) Hard Disk circuit packs and associated UN356 DPC circuit packs from the Disk Pair 0 location (See Figure 1).	Inst	—
36	Following all existing electrostatic discharge practices, install the Type 2 (TN4000) Hard Disk circuit packs and associated Disk Power Controller (DPC) UN356 circuit pack from the Disk Pair 2 location into the Disk Pair 0 location (See Figure 1). ***Note:*** Replace the plastic inserts that were removed in Step 15 at the Disk Pair 2 location.	Inst	—
37	Change SCU 0, Disk Pair 0 capacity and equipage in the SCS Unit Type translator.	Telco/Inst	DLP-517

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
38	Power-up SCU 0 and associated disk pair(s). 1. At the associated disk pair(s), press the **ON** button to power the Disk Power Controller (DPC) UN356 circuit pack. ***Note:*** Wait at least 60 seconds before proceeding with the next step. This allows the disk drives to spin up to operational speed. 2. At SCU 0, press the **ON** button to power the Master Power Controller (MPC) TN1984 circuit pack.	Inst	—
39	At the 1B MTC terminal, perform a soft initialization of SCU 0, Disk Pair 1, by entering the commands given below. ***Note:*** When populating a Type 2 (TN4000 - 4 Gb) disk pair at the SCU 0, Disk Pair 0 location in the SCS Unit Type translator, the adjacent location Disk Pair 1 will also be populated. In order to ensure proper operation, a Soft Initialization (TYP 1) on both Bus 0 and Bus 1 is necessary for Disk Pair 1. 1. **INIT:SCS *x*,SCU 0,DSK 1,BUS 0,TYP 1!** where *x* = Member Number (0-7) Response: `INIT:SCS x, SCU 0 COMPLETE` 2. **INIT:SCS *x*,SCU 0,DSK 1,BUS 1,TYP 1!** where *x* = Member Number (0-7) Response: `INIT:SCS x, SCU 0 COMPLETE`	Telco	—
40	At the 1B MTC terminal, inhibit the LAN by entering: **INH:SCS 0,LAN!** Response: The screen returns `Code 091` followed by `INH:SCS 0, LAN`	Telco/Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED			**FOR DETAILS, GO TO**

41	Restore SCU 0 to service:
	
	A. At SCU 0 of the appropriate SCCC, toggle the **ROS** switch on the TN1984 circuit pack from ROS to NORMAL.
	
	Response: `RST:SCS` *x*`, SCU 0 STOPPED OS RMVD`
	where: *x* = SCS Member Number (0-7)
	
	B. At the 1B MTC terminal, enter:
	RST:SCS *x*,**SCU 0!**
	where: *x* = SCS Member Number (0-7)
	
	Response:
	`DGN:SCS` *x*`, SCU 0 COMPLETE ATP MSG COMPL`
	followed by
	`RST:SCS` *x*`, SCU 0 COMPL`
		Telco/Inst	—

	ALLOW REX		
42	At the 1B MTC terminal, allow REX by entering: **ALW:MACLI,CLASS MTCE!** Response: `AUTOMATIC JOB SCHEDULING RESUMED`	Telco	—

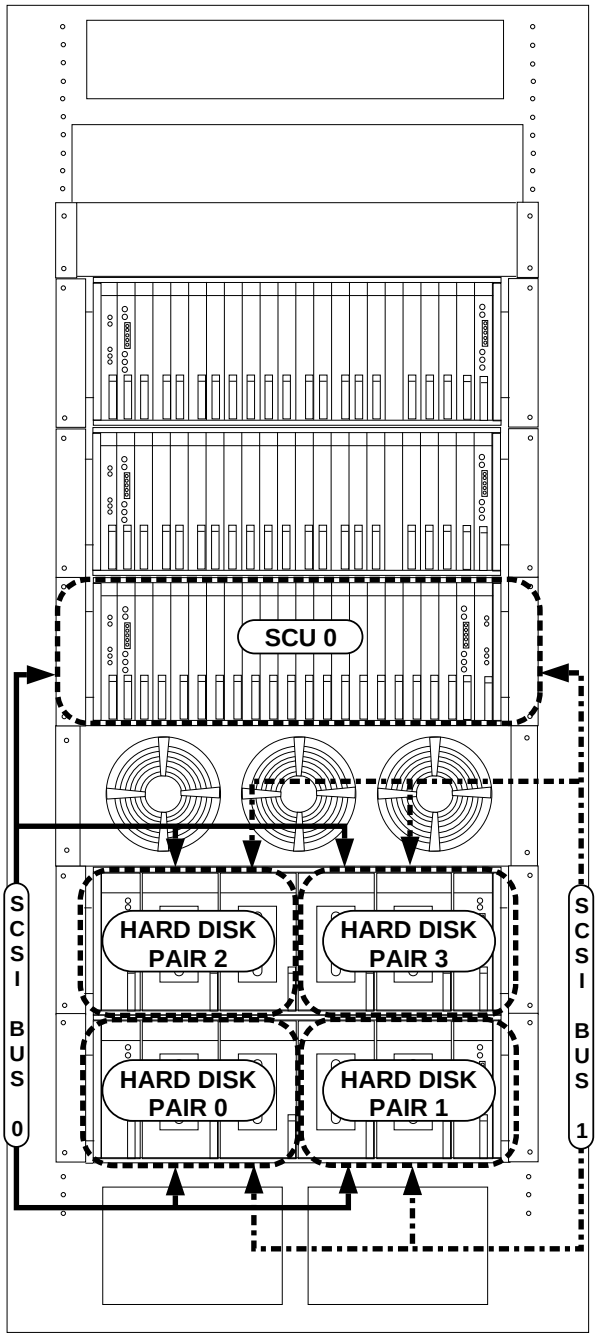

Figure 1. SCU 0, Associated Disk Pairs, and Bus Connections in the SCC Cabinet

Add Service Circuit Unit Cabinet (SCUC)

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
	***4ESS*™ SWITCH OFFICE PRELIMINARY CHECK**		
1	Ensure that the *4ESS* switch is currently running 4E18/AP12 or later Generic.	Telco	—
2	Ensure that within the last 24 hours the Processor has not experienced any TTY terminal suspends, bootstraps, diagnostic failures, or overloads.	Telco	—

3	Ensure that the AT&T 3B20 APS System, the APIs, and the 1B Processor are in the duplex mode, and that the 3B Control Units (CUs) are in ACTIVE-STANDBY mode. Routine Exercise (REX) and the Peripheral Unit System Exerciser (PUSYS) should be disabled, and should remain disabled during the entire growth process. This is accomplished by entering the following at the 1B Maintenance (MTC) terminal:
	
	1. **INH:MACLI,CLASS MTCE;REX!**
	
	Response: `MACLI,CLASS MTCE INHIBITED`
	`AUTOMATIC JOB SCHEDULING`
	`DISALLOWED`
	
	2. **STOP:TEST;PUSYS!**
	
	Response: `OK`
		Telco	—

4	Ensure that diagnostics on the duplexed 3B CUs have been run to completion within the last 24 hours.	Telco	—
5	Ensure that all processor and/or system problems have been cleared.	Telco	—
6	Ensure that the SCS growth complex is in service, operating in duplex, and has run diagnostics to completion within the last 24 hours.	Telco	—
7	Ensure that no Software Updates (SUs)/BWMs for SCS system files are applied during SCS growth.	Telco	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
8	Ensure that the ASM-Plus/SCS LAN connection is present and active, if applicable.	Telco	—
	4ESS SWITCH TO GROWTH SCUC PRELIMINARY INTERCONNECT		
9	Ensure that the growth SCUC frame has been bolted down adjacent to the appropriate SCS complex and the SCS power controller connections from the dedicated *4ESS* switch Power Distribution Frame are completed and tested.	Inst	—
10	Ensure that all Scan Point and Signal Distributor (SD) Point connections from each Service Circuit Unit (SCU) shelf of the growth SCUC to the *4ESS* switch Signal Processor (SP) are complete.	Inst	—
11	Ensure that the alarm connections from each SCU shelf of the growth SCUC to the *4ESS* switch Power Alarm Grid are completed.	Inst	—
12	Ensure that the growth SCUC TTY A, TTY B, and TEL Jack connections to the *4ESS* switch are completed. ***Note:*** These connections only exist in SCUC 2.	Inst	—
13	Ensure that the Active/Standby cables from each SCU shelf (horizontal equipment location [EQL] 024) in the growth SCUC are properly connected. These cables are daisy-chained between each SCU within the growth SCUC.	Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
14	Ensure that the Active/Standby cable from the existing in-service SCUC to the growth SCUC is properly connected. This cable extends the Active/Standby daisy-chain to include the growth SCUC shelves. ***Caution: It is very important to connect this cable properly. If improperly connected during growth, all existing in-service SCUs will lose communication with the Service Circuit Controller (SCC).***	Inst	—
15	Ensure that the Extended BUS cable from the Optical Cross-Connect Panel (OCCP) to the backplane of each SCU shelf (horizontal EQL 024) in the growth SCUC are present. These cables may be connected at each SCU backplane, but not at the OCCP.	Inst	—
16	Ensure that the DS-120 looping cable and its associated strap (pins 023 to 024) are **not** present on the backplane (horizontal EQL 032) for each SCU shelf in the growth SCUC.	Inst	—
17	Ensure that the daisy-chained LAN cables between paddle boards (horizontal EQL 024) on the SCU shelves of the growth SCUC are properly connected.	Inst	—
	GROWTH SCUC TO LOCAL AREA NETWORK (LAN) CONNECTION ***Caution: All preparations for this section, such as acquiring LAN cables/terminators, must be completed prior to inhibiting the LAN. The LAN must not stay inhibited for long periods of time.***		
18	Is the ASM-Plus present and active? If **Yes**, go to Step 19. If **No**, go to Step 20.	Telco	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
19	Inhibit the LAN by entering the following input message at the 1B MTC terminal: **INH:SCS 0,LAN!** Response: The screen returns `Code 091` followed by `INH:SCS 0, LAN`	Telco/Inst	—
20	Re-route the LAN cable to add the growth SCUC to the SCS/ASM-Plus series LAN connection. This daisy-chain connection exists between all SCS complexes and the ASM-Plus. **If adding an SCUC to the end of a lineup**, do the following: 1. Remove the terminated LAN cable from the paddle board at the last daisy-chained SCU. (This cable runs from the 50 ohm terminator on the existing SCUC to the paddle board of the last daisy-chained SCU.) 2. Connect the LAN cable from the growth SCUC to the open termination on the above mentioned paddle board. 3. Ensure the 50 ohm terminator is present at the coax converter of the growth SCUC. **If inserting an SCUC into a lineup**, interrupt the LAN cable between existing SCS complexes and insert the growth SCUC in between two existing SCS complexes. The LAN terminator does not have to be removed.	Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
	LAN CONTINUITY CHECK ***Note:*** For proper LAN functionality there must be continuity between the LAN Terminator at the ASM-Plus and the LAN Terminator located at the highest member number SCS complex (all other complexes being in between).		
21	At the 1B MTC terminal, enter: **DGN:SCS** *x*,**SCU** *y*:**PH 10!** where *x* = First existing LAN-connected SCS Member Number (0-7) (which contains SCU *y*) *y* = Lowest number SCU (0-15) connected to the LAN Response: `RMV SCS x SCU y COMPL,` `DGN SCS x SCS y COMPL ATP` ***Note:*** This diagnostic phase checks LAN continuity for all SCS complexes. If Phase 10 diagnostics fail, appropriate action should be taken to find the "open" in the daisy-chained LAN. If only one SCU exists in an office, alarms may sound when the SCU is removed from service. Retire these alarms at the MCC.	Telco/Inst	—
22	At the 1B MTC terminal, restore the SCU by entering: **RST:SCS** *x*,**SCU** *y*! where *x* = First LAN-connected SCS Member Number (0-7) (which contains SCU *y*) *y* = Lowest number SCU (0-15) connected to the LAN Response: `RST:SCSx, SCUy COMPL`	Telco/Inst	—
23	Is the ASM-Plus present and active (per Step 8)? If **Yes**, go to Step 24. If **No**, go to Step 25.	Telco	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
24	Enable the LAN by entering the following message at the 1B MTC terminal: **ALW:SCS 0,LAN!** Response: The screen returns `Code 091` followed by `ALW:SCS 0,LAN`	Telco/Inst	—
	DIAGNOSE AND RESTORE CONTROLLERS 0 AND 1		
25	At the 1B MTC terminal, diagnose SCS Controller 0 by entering: **DGN:SCS *x*,CONTR 0!** where *x* = Member Number (0-7) Response: The screen returns an output message with `ATP`.	Telco/Inst	—
26	At the 1B MTC terminal, restore SCS Controller 0 by entering: **RST:SCS *x*,CONTR 0!** where *x* = Member Number (0-7) Response: The screen returns an output message with `CATP`, then `RESTORE COMPLETE`. Bit **19** (4E18/4E19) or bit **21** (4E20 and later) will be **set** in the CATP **reason word** (unless the SCS is equipped with one or more SCUs in the SCU8 to SCU15 range), indicating that the unused EBI link test skipped. This is the only allowable exception (no other bits in the CATP reason word should be set).	Telco/Inst	—
27	At the 1B MTC terminal, diagnose SCS Controller 1 by entering: **DGN:SCS *x*,CONTR 1!** where *x* = Member Number (0-7) Response: The screen returns an output message with `ATP`.	Telco/Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
28	At the 1B MTC terminal, restore SCS Controller 1 by entering: **RST:SCS *x*,CONTR 1!** where *x* = Member Number (0-7) Response: The screen returns an output message with `CATP`, then `RESTORE COMPLETE`. Bit **19** (4E18/4E19) or bit **21** (4E20 and later) will be **set** in the CATP **reason word** (unless the SCS is equipped with one or more SCUs in the SCU8 to SCU15 range), indicating that the unused EBI link test skipped. This is the only allowable exception (no other bits in the CATP reason word should be set).	Telco/Inst	—

Add Announcement System Manager (ASM)-Plus Controller and Administrator

Note: This procedure can be used to grow an ASM-Plus Administrator and an ASM-Plus Controller to be used in conjunction with an existing Service Circuit System (SCS) complex. The ASM-Plus Controller is grown at the SCS complex. The ASM-Plus Administrator can either be at the *4ESS* switch or at a remote location.

DO THE ITEMS BELOW IN THE ORDER LISTED			**FOR DETAILS, GO TO**
	4ESS SWITCH OFFICE PRELIMINARY CHECK		
1	Ensure that within the last 24 hours no API interjects, interrupts, or BLMs have occurred.	Telco	—
2	Ensure that the *4ESS* switch is in stable condition.	Telco	—
3	Ensure that the 1B Processor and peripheral units are operating in the Normal Duplex mode.	Telco	—
4	Ensure that within the last 24 hours the SCS and equipped SCUs have been successfully diagnosed.	Telco	—
	SET UP THE ASM-PLUS ADMINISTRATOR		
5	Set up the ASM-Plus Administrator according to the floor plan layout. If the ASM-Plus Administrator is already set up and operational, go to Step 17.	Inst	—
	START UP THE ASM-PLUS ADMINISTRATOR PC		
6	Power up the ASM-Plus Administrator PC and monitor. Response: The automatic boot process starts. The administrator automatically executes a sequence of self-test steps. The monitor displays a series of messages indicating the pass or failure status of each test. The administrator becomes operational on the base operating system. A **Desktop** window is displayed on the ASM-Plus Administrator PC terminal screen.	Telco	—

DO THE ITEMS BELOW IN THE ORDER LISTED		FOR DETAILS, GO TO	
7	At the **Login** window of the ASM-Plus Administrator terminal, while holding the ALT key down, press the E key. Response: The `Console Login` prompt is returned.	Telco	—
8	At the administrator's `Console Login` prompt, enter: **asmplus**	Telco	—
9	At the administrator's `Password` prompt, enter: **asmplus** ***Note:*** The password "asmplus" is a pre-assigned password. This password can be used temporarily, but should be changed to a new password unique to this administrator. Response: The `$` prompt is returned.	Telco	—
10	At the administrator's `$` prompt, start ASM-Plus by entering: **asm** Response: An **ASM-Plus Login** window is displayed.	Telco	—
11	In the `Login` field, enter: **admin** Response: Cursor moves to `Password` field.	Telco	—
12	In the `Password` field, enter: **admin0**	Telco	—
13	Validate the login information by pressing the screen label key, **CONT**. Response: An **ASM-Plus Main Menu** window is displayed on the screen. This window provides access to the windows that support all ASM-Plus capabilities. The method used to access these windows is described in detail in the AT&T 201-519-012, *ASM-Plus User's Guide*. The capabilities to add a *4ESS* switch, SCS, and SCUs to the administrator database will be used in a later section of this procedure.	Telco	—
14	Press **CANCEL** to exit from the **ASM-Plus Main Menu** and return to the console login. Response: The console **Login** screen is displayed.	Telco	—

DO THE ITEMS BELOW IN THE ORDER LISTED		FOR DETAILS, GO TO	
15	This is a **Safe Stop Point**. If stopping, perform Step 16. Otherwise go to Step 17, being sure to read the heading above Step 17.	Telco	—
16	Stop procedure for now. Resume at Step 17 when continuing, being sure to read the heading above Step 17.	Telco	—
	SET UP THE ASM-PLUS CONTROLLER AND CONNECT IT TO THE ASM-PLUS ADMINISTRATOR		
17	Set up the ASM-Plus Controller according to the on-site floor plan layout and drawing ED-4A355-10.	Inst	—
18	Establish a 4-wire Plain Old Telephone Service (POTS) line facility for communication between the FAX/modem card of the ASM-Plus Administrator and the FAX/modem card of the ASM-Plus Controller (See ED-4A355-10 and ED-4A357-10).	Inst	—
	SET UP LOCAL AREA NETWORK (LAN) CABLING BETWEEN THE ASM-PLUS CONTROLLER AND THE SERVICE CIRCUIT UNIT (SCU)		
19	Connect the transceiver cable between the ASM-Plus Controller LAN card and the ASM-Plus Controller transceiver.	Inst	—
20	Connect one end of the **ED-4A286-1B, G3** cable to the ASM-Plus Controller transceiver.	Inst	—
21	Run the other end of the **ED-4A286-1B, G3** cable to the SCU, but **do not connect** it to the SCU at this time. ***Note:*** The maximum length of this cable is 600 feet. Distances greater than this require a repeater.	Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
	START UP THE ASM-PLUS CONTROLLER PC		
22	Power up the ASM-Plus Controller PC and monitor. Response: The automatic boot process starts. The controller automatically executes a sequence of self-test steps. The monitor displays a series of messages indicating the pass or failure status of each test. The ASM-Plus Controller becomes operational on the base operating system.	Inst	—
	TEST ASM-PLUS CONTROLLER LOGIN		

23	At the **Login** window of the ASM-Plus Controller terminal, while holding the ALT key down, press the E key.
	
	Response:
	`Welcome to "USL UNIX System V Release 4.2 Version 1"`
	`Console Login:`
		Telco	—

24	At the `Console Login` prompt at the ASM-Plus Controller, enter: **asmc**	Telco	—
25	At the `Password` prompt at the ASM-Plus Controller, enter: **asmpc** Response: The `$` prompt is returned, and the ***UnixWare**** **Desktop asmc** window is displayed. ***Note:*** The password "asmpc" is a pre-assigned password. This password can be used temporarily, but should be changed to a new password assigned only to the *4ESS* switch where the ASM-Plus Controller is installed.	Telco	—
26	In the ***UnixWare*** **Desktop asmc** window, double-click on the **Accessory** icon, using the mouse. Response: The **Folder Accessory** window is accessed.	Telco	—

* Registered trademark of Novell, Inc.

DO THE ITEMS BELOW IN THE ORDER LISTED		FOR DETAILS, GO TO	
27	In the **Folder Accessory** window, double-click on the **Terminal** icon, using the mouse. Response: The **Terminal** window is accessed.	Telco	—
	TEST ASM-PLUS CONTROLLER EXITING FROM THE UnixWare DESKTOP WINDOW		
28	At the ASM-Plus Controller, while holding down the Alt key, press the F4 key. Response: The **Folder Accessory** window is accessed.	Telco	—
29	At the ASM-Plus Controller, while holding down the ALT key down, press the F4 key. Response: The ***UnixWare*** **Desktop - asmc** window is accessed.	Telco	—
30	At the ASM-Plus Controller, while holding down the ALT key down, press the F4 key. Response: The ***UnixWare*** **Desktop** window containing the **Save Session and Exit** icon is accessed.	Telco	—
31	At the ASM-Plus Controller, click on the **Save Session and Exit** icon. Response: The desktop session ends and you have direct access to UNIX* System V/386 Release 4.2 Version 1. The time and date of the last login is displayed.	Telco	—
32	At the ASM-Plus Controller, log off by entering: **exit** Response: `Welcome to "USL UNIX System V Release 4.2 Version 1".` `Console Login:`	Telco	—
33	This is a **Safe Stop Point**. If stopping, perform Step 34. Otherwise go to Step 35, being sure to read the heading above Step 35.	Telco	—

* Registered trademark of Novell, Inc.

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
34	Stop procedure for now. Resume at Step 35 when continuing, being sure to read the heading above Step 35.	Telco	—
	PREPARE THE SCS FOR THE ASM-PLUS FEATURE		
35	Ensure that Steps 1-4 have been successfully completed.	Telco/Inst	—
36	Notify the next higher technical support group that the SCS is being prepared for the ASM-Plus feature.	Telco/Inst	—
37	Disable Routine Exercise (REX) by entering the following at the 1B Maintenance (MTC) terminal: **INH:MACLI,CLASS MTCE;REX!** Response: `MACLI,CLASS MTCE INHIBITED` `AUTOMATIC JOB SCHEDULING DISALLOWED`	Telco	—
38	Disable the Peripheral Unit System Exerciser (PUSYS) by entering the following at the 1B MTC terminal: **STOP:TEST;PUSYS!** Response: `OK`	Telco	—
39	Set SCS LAN pests (to inhibit any LAN activity reporting by the SCUs) by entering the following input message at the 1B MTC terminal: **INH:SCS *x*,LAN!** where *x* = SCS Member Number (0-7) Response: `INH:SCS x, LAN COMPLETED` ***Note:*** When the above message is entered, all SCS LAN pests are set, regardless of which SCS member number is chosen.	Telco/Inst	—
40	On the MCC SYSTEM STATUS section, poke `Interrupt Inhibit` indicator. Response: Interrupt Inhibit light goes off.	Telco/Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO

41	At the 1B MTC terminal, diagnose and restore to service **each equipped SCU** by entering: **RST:SCS** *x***,SCU** *y***!**
	
	where *x* = SCS Member Number (0-7)
	y = SCU Member Number (0-15)
	
	Response: `RMV SCS x SCU y COMPLETED`
	`DGN SCS x SCS y COMPLETED ATP`
	`RST SCS x SCU y COMPLETED`
		Telco/Inst	—

42	Connect the end of the **ED-4A286-1B, G3** cable that was run in Step 21 to the SCU. This connects the SCU and the ASM-Plus Controller transceiver. A. At the ASM-Plus Controller, make sure that the transceiver cable (ED-4A286-18, G3) is connected to the LAN Transceiver. B. At SCS cabinet 0, remove the SCU LAN coaxial terminating plug (EQL 63-200-E). C. At SCS cabinet 0, connect the LAN Transceiver cable (ED-4A286, G3) to the connector from which the terminating plug was removed (EQL 63-200-E).	Inst	—

43	At the 1B MTC terminal, diagnose and restore to service **each equipped SCU** by entering: **RST:SCS** *x***,SCU** *y***!**
	
	where *x* = SCS Member Number (0-7)
	y = SCU Member Number (0-15)
	
	Response: `RMV SCS x SCU y COMPLETED`
	`DGN SCS x SCS y COMPLETED ATP`
	`RST SCS x SCU y COMPLETED`
		Telco/Inst	—

44	At the 1B MTC terminal, determine if the ASM-Plus feature needs to be turned on by entering: **VER:ABSOLUTE:ADR** *a***!** where *a* = 7521101 for 4E18, or 7004647 for 4E19, 4E20, and 4E21 Response: `VER:ABSOLUTE` `ADDRESS CONTENTS` *xxxxxxx* `000003`*yy* where *xxxxxxx* = 7521101 for 4E18, or 7004647 for 4E19 *yy* = variable octal value (not being tested at this time)	Telco/Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED			**FOR DETAILS, GO TO**
45	According to the printout generated in the previous step, are bits 6 and 7 of the requested word set to **1**? If **No**, continue to Step 46. If **Yes**, go to Step 49.	Telco/Inst	—
46	If the current Generic Release is 4E18R3, 4E19R3, or later, turn on the ASM-Plus feature using Recent Change Form 809. ***Note:*** When making recent changes, it is recommended that the recent changes be entered at the Secondary Records (SREC) terminal.	Telco/Inst	DLP-521
47	If the current Generic Release is 4E18R2 or 4E19R2, turn on the ASM-Plus feature using Recent Change Form 800. ***Note:*** When making recent changes, it is recommended that the recent changes be entered at the Secondary Records (SREC) terminal.	Telco/Inst	DLP-543
48	At the 1B MTC terminal, verify that the ASM-Plus feature bits are set to **1** by entering: **VER:ABSOLUTE:ADR** *a***!** where *a* = 7521101 for 4E18, or 7001162 for 4E19 Response: `VER:ABSOLUTE` `ADDRESS CONTENTS` *xxxxxxx* `000003`*yy* where *xxxxxxx* = 7521101 for 4E18, or 7001162 for 4E19 *yy* = variable octal value (not being tested at this time)	Telco/Inst	—
49	On the MCC SYSTEM STATUS section, poke `Interrupt Inhibit` indicator to verify that the SCS is not the reason for an interrupt.	Telco/Inst	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
50	Reset the SCS LAN pests (to allow LAN activity reporting by the SCUs) by entering the following message at the 1B MTC terminal: **ALW:SCS** *x*,**LAN!** where *x* = SCS Member Number (0-7) Response: `ALW:SCS` *x*`, LAN COMPLETED` ***Note:*** When the above message is entered, all SCS LAN pests are reset, regardless of which SCS member number is chosen.	Telco/Inst	—
51	On the MCC SYSTEM STATUS section, poke `Interrupt Inhibit`. Response: `Interrupt Inhibit` light goes "OFF." Verify that SCS is not listed, indicating that the SCS is not blocked from announcement updates. Wait at least 1 minute at the terminal to check for interjects.	Telco/Inst	—
52	At the 1B MTC terminal, allow PUSYS by entering: **TEST:PUSYS!** Response: `OK`	Telco	—
53	At the 1B MTC terminal, allow REX by entering: **ALW:MACLI,CLASS MTCE!** Response: `AUTOMATIC JOB SCHEDULING RESUMED`	Telco	—
54	This is a **Safe Stop Point**. If stopping, perform Step 55. Otherwise go to Step 56, being sure to read the heading above Step 56.	Telco	—
55	Stop procedure for now. Resume at Step 56 when continuing, being sure to read the heading above Step 56.	Telco	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
	TEST CONNECTIVITY BETWEEN THE ASM-PLUS CONTROLLER AND THE SCU ***Note:*** At this point, a `Console Login:` prompt should be displayed on the controller screen.		
56	At the `Console Login` prompt at the ASM-Plus Controller, enter: **asmc**	Telco	—
57	At the `Password` prompt at the ASM-Plus Controller, enter: **asmpc** Response: The `$` prompt is returned, and the ***UnixWare*** **Desktop** window is displayed. ***Note:*** The password "asmpc" is a pre-assigned password. This password can be used temporarily, but should be changed to a new password assigned only to the *4ESS* switch where the ASM-Plus Controller is installed.	Telco	—
58	In the ***UnixWare*** **Desktop** window, double-click on the **Accessory** icon, using the mouse. Response: The **Accessory** window is accessed.	Telco	—
59	In the **Accessory** window, double-click on the **Terminal** icon, using the mouse. Response: The ASM-Plus Controller *UNIX* **Terminal** window is accessed.	Telco	—
60	Obtain the member number of the SCUs that are in the operational state.	Telco	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
61	At the ASM-Plus Controller, test the connectivity between the ASM-Plus Controller and the SCU by entering: **dgn -c***A* **-u***B* where *A* = SCS Member Number (0-7) *B* = SCU Number of the lowest numbered operational SCU that has not yet been tested (0-15) Response: If the test is successful, the `$` prompt is returned. If the test failed, the following message is returned, followed by the `$` prompt: `DL_data_recv failed ref-code = 0x9` (0x9 indicates no connectivity to the SCU)	Telco	—
62	At the ASM-Plus Controller, obtain the results of the test that was run in the previous step by entering: **cat reply/rp.out** Response: If the testing was successful: `dgn:`*a*`:`*b*`:`*[date, time, and year]* If the testing was unsuccessful: `ERROR:DGN:`*a*`:`*b*`:0:5074` *[date, time, and year]* `ERROR:DGN:`*a*`:`*b*`:5064:4` *[date, time, and year]* where *a* = SCS Member Number (0-7) *b* = SCU Number (0-15)	Telco	—
63	Repeat Steps 61 and 62 for each operational SCU. When connectivity between the ASM-Plus Controller and all operational SCUs have been tested, continue to the next step.	Telco	—
64	At the ASM-Plus Controller, while in the **Terminal** window, enter: **su -root** Response: The `Password:` prompt is displayed.	Telco	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
65	At the `Password:` prompt, enter: **root** Response: The # prompt is displayed.	Telco	—
66	At the `#:` prompt, assign the identity name and the system name for the *4ESS* switch by entering: **uname -S** *a* **-h** *b* where *a* = Identity name for the switch *b* = System name (should be identical to *a*)	Telco	—
67	At the `#:` prompt, verify the identity name and the system name assigned to the *4ESS* switch by entering: **uname -a** Response: The correct identity name and system name should be displayed.	Telco	—
	VERIFY THAT THE POTS LINE TO THE ASM-PLUS ADMINISTRATOR IS ESTABLISHED		

68	At the ASM-Plus Controller's $ prompt, enter:
	cu *xxxyyyyyyy*
	
	where *xxx* = Area Code (if required)
	yyyyyyy = POTS Phone Number
	
	Response: After approximately 30 seconds:
	`CONNECTED`
	`Welcome to USL UNIX System V Release 4.2 Version 1`
	`SVR 4.2 login ~[nnnn].`
		Telco	—

69	At the ASM-Plus Controller's `login` prompt, enter: **~.** Response: `DISCONNECTED` followed by the $ prompt.	Telco	—
70	At the ASM-Plus Controller, while holding down the Alt key, press the F4 key. Response: The **Accessory** window is accessed.	Telco	—

DO THE ITEMS BELOW IN THE ORDER LISTED		FOR DETAILS, GO TO	
71	At the ASM-Plus Controller, while holding down the Alt key, press the F4 key. Response: The ***UnixWare*** **Desktop** window is displayed.	Telco	—
72	In the ***UnixWare*** **Desktop** window, double-click on the **System Setup** icon, using the mouse. Response: The **System Setup** window is accessed.	Telco	—
73	In the **System Setup** window, double-click on the **Dialup Setup** icon, using the mouse. Response: The **Dialup Setup** window is accessed.	Telco	—
74	In the **Dialup Setup** window, click on **System**, using the mouse. Response: The **System** submenu is accessed.	Telco	—
75	From the **System** menu, select **New**. Response: The **System** form is displayed on the screen.	Telco	—
76	On the **System** form, click on the following fields and enter the required information: • `System Name`: enter **asmp** • `Phone Number`: enter the phone number of the ASM-Plus Administrator. • `Password`: enter **nuucp**	Telco	—
77	On the **System** form, click on **Apply**. Response: The **Dialup Setup** window is displayed on the screen.	Telco	—
78	In the **Dialup Setup** window, click on **Action**, using the mouse. Response: The **Action** submenu is accessed.	Telco	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
79	From the **Action** menu, select **Save System List**. Response: The **Dialup Setup** window is displayed on the screen.	Telco	—
80	At the ASM-Plus Controller, while holding down the Alt key, press the F4 key. Response: The ***UnixWare*** **Desktop** window is displayed.	Telco	—
81	In the ***UnixWare*** **Desktop** window, double-click on the **Accessory** icon, using the mouse. Response: The **Accessory** window is accessed.	Telco	—
82	In the **Accessory** window, double-click on the **Terminal** icon, using the mouse. Response: The **Terminal** window is accessed.	Telco	—
83	In the **Terminal** window, enter: **su -root** Response: The `Password:` prompt is displayed.	Telco	—
84	At the `Password:` prompt, enter: **root** Response: The # prompt is displayed.	Telco	—
85	Using either **ed** or **vi**, edit the **Systems** file. On the last line in the file, add **;1** immediately after the first **Any** so that the line will be as follows: `asmp Any;1 ACU Any` *xxxxxxx* `"" \r\d "" \r\d in:--in: nuucp word: nuucp` where *xxxxxxx* = the phone number of the ASM-Plus Administrator (same as entered in Step 68).	Telco	—
86	Save the modification performed in the previous step and exit the file. Response: The # prompt is displayed.	Telco	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
	EXIT FROM THE ASM-PLUS CONTROLLER UnixWare DESKTOP WINDOWS		
87	At the ASM-Plus Controller, while holding down the Alt key, press the F4 key. Response: The **Folder Accessory** window is displayed.	Telco	—
88	At the ASM-Plus Controller, while holding down the Alt key, press the F4 key. Response: The ***UnixWare*** **Desktop - asmc** window is displayed.	Telco	—
89	At the ASM-Plus Controller, while holding down the Alt key, press the F4 key. Response: The ***UnixWare*** **Desktop** window containing the **Save Session and Exit** icon is displayed.	Telco	—
90	At the ASM-Plus Controller, click on the **Save Session and Exit** icon. Response: The desktop session ends and you have direct access to *UNIX* System V/386 Release 4.2 Version 1.1. The time and date of the last login is displayed.	Telco	—
91	At the ASM-Plus Controller, log off by entering: **exit** Response: `Welcome to "USL UNIX System V Release 4.2 Version 1".` `Console Login:`	Telco	—
92	This is a **Safe Stop Point**. If stopping, perform Step 93. Otherwise go to Step 94, being sure to read the heading above Step 94.	Telco	—
93	Stop procedure for now. Resume at Step 94 when continuing, being sure to read the heading above Step 94.	Telco	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
	LOG INTO THE ASM-PLUS ADMINISTRATOR ***Note:*** At this point, you should be at the **ASM-Plus Administrator Login Screen**.		
94	In the `Login ID` field, enter: **admin** Response: Cursor moves to `Password` field.	Telco	—
95	In the `Password` field, enter: **admin0**	Telco	—
96	Validate the login information by pressing the screen label key, **CONT**. Response: An **ASM-Plus Main Menu** window is displayed on the screen.	Telco	—
	ADD THE 4ESS SWITCH TO THE ASM-PLUS ADMINISTRATOR DATABASE ***Note:*** You should now be in the **ASM-Plus Main Menu** window. In this window, there is a list of other windows that you can access. To access one of the listed windows, highlight the desired window and press Enter. This is the process used to "select" a window in the following procedures. To back up to a previous window, press the screen label key, **CANCEL**. Additional information on navigating through ASM-Plus windows can be found in AT&T 201-519-012, *ASM-Plus User's Guide*.		
97	From the **ASM-Plus Main Menu** window, select the **Database Manager** menu item. Response: The **Database Menu** window is displayed on the screen.	Telco	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
98	From the **Database Menu** window, select the **Add** menu item. Response: The **Add Menu** window is displayed on the screen.	Telco	—
99	From the **Add Menu** window, select the **Switch** menu item. Response: The **Add a Switch** form is displayed on the screen.	Telco	—
100	On the **Add a Switch** form, enter the Switch required information in following fields: • **Switch Clli**: The clli of the switch (maximum of 11 characters) • **Switch Name**: A short mnemonic name of the switch (maximum of 8 characters) • **Street**: Street location of the switch (maximum of 30 characters) • **City**: City where the switch is located (20 characters) • **State**: State abbreviation (2 letters) (By pressing the **CHOICES** key, a menu of state abbreviations is displayed) • **Zip**: Zip code of the location (only a 5-digit or a 9-digit number is accepted) • **Supervisor**: Name of the office supervisor (maximum of 20 characters) • **Supervisor's Phone**: Telephone number of the office supervisor (maximum of 16 characters) • **Phone Number of the ASM-Plus Controllers Modem**: (maximum of 16 characters) (The "-" character causes a 4-second delay in dialing. The "=" character causes a wait for a secondary tone.)	Telco	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
101	To add the information entered in the previous step to the database, press **CONT**. Response: A status window is displayed, indicating that the information has been added to the database, or that an "offform" validation has failed.	Telco	—
102	Repeat pressing **CANCEL** until you return to the **Add Menu** window. Response: The **Add Menu** window is displayed.	Telco	—
	ADD THE SCS TO THE ASM-PLUS ADMINISTRATOR DATABASE		
103	From the **Add Menu** window, select the **SCS** menu item. Response: The **Select a Switch** menu is displayed on the screen.	Telco	—
104	From the **Select a Switch** menu, select the desired switch (the one that was just added to the database in the previous steps). Response: The **Add an SCS** form is displayed on the screen.	Telco	—
105	On the **Add an SCS** form, enter the SCS Member Number (0-7) in the **SCS Number** field.	Telco	—
106	To add the information entered in the previous step to the database, press **CONT**. Response: SCS *a* `for switch` *b* `has been added to the database` where *a* = SCS Member Number *b* = Clli Identifier	Telco	—
107	Repeat pressing **CANCEL** until you return to the **Add Menu** window. Response: The **Add Menu** window is displayed.	Telco	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
	ADD THE SCUs TO THE ASM-PLUS ADMINISTRATOR DATABASE		
108	Obtain the member number of the SCUs that are in the operational state.	Telco	—
109	From the **Add Menu** window, select the **SCU** menu item. Response: The **Select a Switch** menu is displayed on the screen.	Telco	—
110	From the **Select a Switch** menu, select the desired switch. Response: The **Select an SCS** menu is displayed on the screen.	Telco	—
111	From the **Select an SCS** menu, select the desired SCS. Response: The **Add an SCU** form is displayed on the screen.	Telco	—
112	On the **Add an SCU** form, enter the SCU Number (0-15), in the `SCU Number` field. This should be the lowest numbered operational SCU that has not yet been added to the administrator database.	Telco	—
113	To add the information entered in the previous step to the database, press **CONT**. Response: `SCU` *a* `has been added to the SCS` *b* `of switch clli` *c* `in the database` where *a* = SCU Number *b* = SCS Member Number *c* = Clli Identifier	Telco	—
114	Repeat Steps 112 and 113 for each SCU to be added to the administrator database. When all operational SCUs has been added to the database, continue to the next step.	Telco	—
115	Repeat pressing **CANCEL** until you return to the **Add Menu** window. Response: The **Add Menu** window is displayed.	Telco	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
	AT THE ASM-PLUS ADMINISTRATOR, ADD AN SCU CONNECTIVITY TEST (DGN) COMMAND		
116	From the **ASM-Plus Main Menu**, select **SCU Interface**. Response: The **Select a Switch** menu is displayed on the screen.	Telco	—
117	From the **Select a Switch** menu, select the desired switch. Response: The **Select a Script Operation** menu is displayed on the screen.	Telco	—
118	From the **Select a Script Operation** menu, select **Clear Script**. Response: The **Clear Script** window is displayed on the screen.	Telco	—
119	Press **CONT** to clear the script file.	Telco	—
120	Press **CANCEL** to return to the **Select a Script Operation** menu.	Telco	—
121	From the **Select a Script Operation** menu, select **Modify Script**. Response: The **Select an Edit Operation** menu is displayed on the screen.	Telco	—
122	From the **Select an Edit Operation** menu, select **Add**. Response: The **Select an SCS** menu is displayed on the screen.	Telco	—
123	From the **Select an SCS** menu, select the desired SCS. Response: The **Select an SCU** menu is displayed on the screen.	Telco	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
124	From the **Select an SCU** menu, select the desired SCU. Response: The **Select an SCU Command** menu is displayed on the screen.	Telco	—
125	From the **Select an SCU Command** menu, select **SCU Connect Test (dgn)**.	Telco	—
126	Repeat pressing **CANCEL** until you return to the **Select a Script Operation** window. Response: The **Select a Script Operation** window is displayed.	Telco	—
127	From the **Select a Script Operation** menu, select **Send Script**. Response: The **Send Script Information** window is displayed on the screen. The administrator dials out to the controller and receives two separate callback tones from the controller. **Do not exit from the *Send Script Information* window until the second callback tone from the controller is received.**	Telco	—
128	Exit from the **Send Script Information** window. If there is no `Process Reply` menu item, then reply from the controller is not available yet. Refresh this window by exiting the **Select a Script Operation** window, then return to it.	Telco	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
129	From the **Select a Script Operation** menu, select **Process Reply**. Response: The **Process Reply** window displays the results of the test. If the testing was successful, the following message is displayed in the **Process Reply** window: `dgn:`*a*`:`*b*`:`*[date, time, and year]* If the connectivity failed, the following message is displayed: `ERROR:DGN:`*a*`:`*b*`:0:5074` *[date, time, and year]* `ERROR:DGN:`*a*`:`*b*`:5064:4` *[date, time, and year]* where *a* = SCS Member Number (0-7) *b* = SCU Number (0-15) A printout of the results displayed in the **Process Reply** window can be obtained from the administrator printer by pressing F8.	Telco	—
130	Press **CONT** and then **CANCEL** to return to the **Select a Script Operation** window.	Telco	—
131	Repeat pressing **CANCEL** until the *UNIX* system $ prompt is returned.	Telco	—
132	Return to the Console Login by entering: **exit** Response: Time and date of last login is displayed.	Telco	—

Recent Change and Verify Member Equipage From UNEQ to GROW Using Recent Change (RC) Form 700

Caution: Calling up an RC form will cause all data on the screen to be cleared.

1. At the 1B Maintenance (MTC) terminal, enter **OP:RCFORM 700!**

   Response: Recent Change Form 700 appears on the screen.

2. At UTYN, enter **SCS**.

3. At ORNU, enter a unique Order Number.

4. At MEMN, enter the Member Number.

5. At ME, enter **UNEQ** under OLD, then enter **GROW** under NEW.

6. If no REMARKS are needed, return the cursor to the top of the form by pressing HOME.

7. Press SEND/ENTER

   Response: RC ORNU *a* SUCCESSFULLY TESTED followed by
   RC ORNU *a* SUCCESSFULLY BUFFERED followed by all new entries.

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat Steps 1 through 7.

8. At the 1B MTC terminal, enter **RCACT:ORNU** *a***!**

   where *a* = RC Order Number

   Response: `RC ORNU` *a* `ACTIVATED` followed by all new entries.

   where *a* = RC Order Number

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, remove recent change using RC form 701 and repeat this DLP.

9. At the 1B MTC terminal, enter **VER:UTYPE:SCS** *x***!**

   where *x* = Member Number (0-7)

   Response:
   ```
   VER:UTMN;OPT(),CUR:
   FLN a
   UTYN b
   MEMN c
   ME d
   ENTRY ADDRESS e
   ENTRY SIZE f
   ```

   The above responses are followed by a complete printout of the SCS unit type entry data. (Use this printout to determine if data was properly entered.)

   where *a* = Floor location number
   b = Unit type name
   c = Member number of growth associated complex
   d = Member equipage
   e = An 8-digit entry address
   f = A 2-digit entry size

10. **STOP! YOU HAVE COMPLETED THIS PROCEDURE.**

Recent Change and Verify Member Equipage From GROW to SGRO Using Recent Change (RC) Form 700

Caution: Calling up an RC form will cause all data on the screen to be cleared.

1. At the 1B MTC terminal, enter **OP:RCFORM 700!**

   Response: Recent Change Form 700 appears on the screen.

2. At UTYN, enter **SCS**.

3. At ORNU, enter a unique Order Number.

4. At MEMN, enter the Member Number.

5. At ME, enter **GROW** under OLD, then enter **SGRO** under NEW.

6. If no REMARKS are needed, return the cursor to the top of the form by pressing HOME.

7. Press SEND/ENTER

   Response: RC ORNU *a* SUCCESSFULLY TESTED followed by RC ORNU *a* SUCCESSFULLY BUFFERED followed by all new entries.

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat Steps 1 through 7.

8. At the 1B MTC terminal, enter **RCACT:ORNU** *a***!**

   where *a* = RC Order Number

   Response: `RC ORNU` *a* `ACTIVATED` followed by all new entries.

   where *a* = RC Order Number

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, remove recent change using RC form 701 and repeat this DLP.

9. At the 1B MTC terminal, enter **VER:UTYPE:SCS** *x***!**

   where *x* = Member Number (0-7)

   Response:
   ```
   VER:UTMN;OPT(),CUR:
   FLN a
   UTYN b
   MEMN c
   ME d
   ENTRY ADDRESS e
   ENTRY SIZE f
   ```

   The above responses are followed by a complete printout of the SCS unit type entry data. (Use this printout to determine if data was properly entered.)

   where *a* = Floor location number
   b = Unit type name
   c = Member number of growth associated complex
   d = Member equipage
   e = An 8-digit entry address
   f = A 2-digit entry size

10. **STOP! YOU HAVE COMPLETED THIS PROCEDURE.**

Recent Change and Verify Submember Equipage From UNEQ to GROW Using Recent Change (RC) Form 700

Caution: Calling up an RC form will cause all data on the screen to be cleared.

1. At the 1B Maintenance (MTC) terminal, enter **OP:RCFORM 700!**

   Response: Recent Change Form 700 appears on the screen.

2. At `UTYN`, enter **SCS**.

3. At `ORNU`, enter a unique Order Number.

4. At `MEMN`, enter the Member Number.

5. At `SUBMEM`, enter the Submember Name (**SCUEQ[0-15]**, where 0-15 is the SCU number).

6. At `SME`, enter **UNEQ** under `OLD`, then enter **GROW** under `NEW`.

7. If no `REMARKS` are needed, return the cursor to the top of the form by pressing HOME.

8. Press SEND/ENTER

   Response: `RC ORNU` *a* `SUCCESSFULLY TESTED` followed by
   `RC ORNU` *a* `SUCCESSFULLY BUFFERED` followed by all new entries.

   where *a* = RC Order Number

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat Steps 1 through 8.

9. At the 1B MTC terminal, enter **RCACT:ORNU** *a***!**

   where *a* = RC Order Number

   Response: `RC ORNU` *a* `ACTIVATED` followed by all new entries.

   where *a* = RC Order Number

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, remove recent change using RC form 701 (DLP-536) and repeat this DLP.

10. At the 1B MTC terminal, enter **VER:UTYPE:SCS** *x***,SME** *y***!**

    where *x* = Member Number (0-7)
    y = SCU Index Number (See Table A)

TABLE A SCU Index Numbers

SCU	INDEX NO.	SCU	INDEX NO.	SCU	INDEX NO.	SCU	INDEX NO.
0	177	4	181	8	185	12	189
1	178	5	182	9	186	13	190
2	179	6	183	10	187	14	191
3	180	7	184	11	188	15	192

Response:
```
VER:UTMN;OPT(SME),CUR:
FLN a
UTYN b
MEMN c
ME d
SME e
SUBMEM f
```

where *a* = Floor location number
b = Unit type name
c = Member number of growth associated complex
d = Member equipage
e = Submember equipage (SME)
f = SME index number

Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat this step using correct data.

11. **STOP! YOU HAVE COMPLETED THIS PROCEDURE.**

Recent Change and Verify Each Associated Disk Pair and Multifaceted Signal Processor (MSP) Equipage From UNEQ to GROW Using Recent Change (RC) Form 703

Caution: Calling up an RC form will cause all data on the screen to be cleared.

1. At the 1B Maintenance (MTC) terminal, enter **OP:RCFORM 703!**

   Response: Recent Change Form 703 appears on the screen.

2. At SCS, enter growth Member Number (0-7).

3. At SCU, enter the growth SCU Number (0-15).

4. At ORNU, enter a unique Order Number.

5. At the appropriate MSBEQ location(s), enter **G** (grow).

   Note: If the SCU has more than one associated Multifaceted Signal Processor circuit pack (TN1589), also enter **G** at locations 1 through 3 of MSBEQ, as required.

6. At the appropriate DSKEQ location(s), enter **G** (grow).

   Note: If SCU 0 is being grown and has more than one associated disk pair, also enter **G** at locations 1 through 3 of DSKEQ, as required.

7. Are TN4000 circuit packs being used as the disk pair(s) associated with the growth SCU?

   If **Yes**, go to Step 8.
   If **No**, go to Step 9.

8. At the appropriate DSKC location(s) 0 and/or 2, enter **2**.

9. If no REMARKS are needed, return the cursor to the top of the form by pressing HOME.

10. Press SEND/ENTER

    Response: `RC ORNU` *a* `SUCCESSFULLY TESTED` followed by
    `RC ORNU` *a* `SUCCESSFULLY BUFFERED` followed by all new entries.

    where *a* = RC Order Number

    Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat Steps 1 through 10.

11. At the 1B MTC terminal, enter **RCACT:ORNU** *a***!**

    where *a* = RC Order Number

    Response: `RC ORNU` *a* `ACTIVATED` followed by all new entries.

    Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat this DLP correcting the errors.

12. At the 1B MTC terminal, enter **VER:UTYPE:SCS** *x***!**

    where *x* = Member Number (0-7)

    Caution: When populating* DSKEQ *for a Type 2 (TN4000 - 4 Gb) disk pair at location 0 and/or 2, the adjacent locations 1 and/or 3 will also be populated when checking the unit type translator. This is done automatically via recent change.

    Response:
    ```
    VER:UTMN;OPT(),CUR:
    FLN a
    UTYN b
    MEMN c
    ME d
    ENTRY ADDRESS e
    ENTRY SIZE f
    ```

    The above responses are followed by a complete printout of the SCS unit type entry data. Use this printout and Figure 1 to determine if the SCU data (MSP and disk pair equipage) was properly entered.

    where *a* = Floor location number
    b = Unit type name
    c = Member number of growth associated complex
    d = Member equipage
    e = An 8-digit entry address
    f = A 2-digit entry size

13. **STOP! YOU HAVE COMPLETED THIS PROCEDURE.**

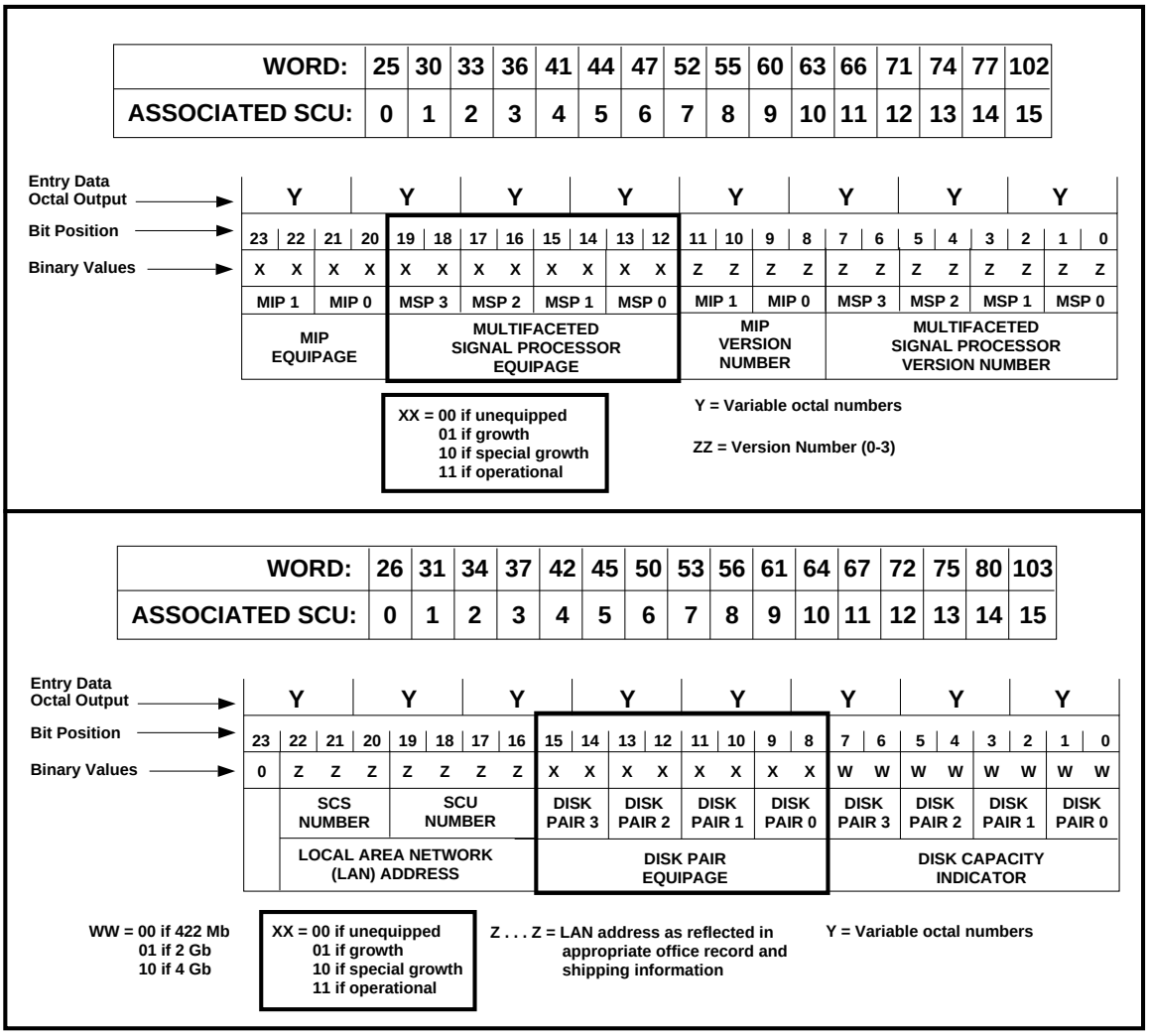

Figure 1. Words in SCS Unit Type Translator Used to Determine MSP and Disk Pair Equipage

Recent Change and Verify Submember Equipage From GROW to SGRO Using Recent Change (RC) Form 700

Caution: Calling up an RC form will cause all data on the screen to be cleared.

1. At the 1B Maintenance (MTC) terminal, enter **OP:RCFORM 700!**

   Response: Recent Change Form 700 appears on the screen.

2. At UTYN, enter **SCS**.

3. At ORNU, enter a unique Order Number.

4. At MEMN, enter the Member Number.

5. At SUBMEM, enter the Submember Name (**SCUEQ[0-15]**, where 0-15 is the SCU number).

6. At SME, enter **GROW** under OLD, then enter **SGRO** under NEW.

7. If no REMARKS are needed, return the cursor to the top of the form by pressing HOME.

8. Press SEND/ENTER

   Response: RC ORNU *a* SUCCESSFULLY TESTED followed by
   RC ORNU *a* SUCCESSFULLY BUFFERED followed by all new entries.

   where *a* = RC Order Number

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat Steps 1 through 8.

9. At the 1B MTC terminal, enter **RCACT:ORNU** *a***!**

   where *a* = RC Order Number

   Response: `RC ORNU` *a* `ACTIVATED` followed by all new entries.

   where *a* = RC Order Number

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, remove recent change using RC form 701 (DLP-535) and repeat this DLP.

10. At the 1B MTC terminal, enter **VER:UTYPE:SCS** *x*,**SME** *y*!

    where *x* = Member Number (0-7)
    y = SCU Index Number (See Table A)

TABLE A SCU Index Numbers

SCU	INDEX NO.	SCU	INDEX NO.	SCU	INDEX NO.	SCU	INDEX NO.
0	177	4	181	8	185	12	189
1	178	5	182	9	186	13	190
2	179	6	183	10	187	14	191
3	180	7	184	11	188	15	192

Response:
```
VER:UTMN;OPT(SME),CUR:
FLN a
UTYN b
MEMN c
ME d
SME e
SUBMEM f
```

where *a* = Floor location number
b = Unit type name
c = Member number of growth associated complex
d = Member equipage
e = SubMember Equipage (SME)
f = SME index number

Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat this step using correct data.

11. **STOP! YOU HAVE COMPLETED THIS PROCEDURE.**

Recent Change and Verify Each Associated Disk Pair and Multifaceted Signal Processor (MSP) Equipage From GROW to SGRO Using Recent Change (RC) Form 703

Caution: Calling up an RC form will cause all data on the screen to be cleared.

1. At the 1B Maintenance (MTC) terminal, enter **OP:RCFORM 703!**

   Response: Recent Change Form 703 appears on the screen.

2. At SCS, enter growth Member Number (0-7).

3. At SCU, enter the number of the growth SCU (0-15).

4. At ORNU, enter a unique Order Number.

5. At the appropriate MSBEQ location(s), enter **S** (special grow).

   Note: If the SCU has more than one associated Multifaceted Signal Processor circuit pack (TN1589), also enter **S** at locations 1 through 3 of MSBEQ, as required.

6. At the appropriate DSKEQ location(s), enter **S** (special grow).

   Note: If SCU 0 is being grown and has more than one associated disk pair, also enter **S** at locations 1 through 3 of DSKEQ, as required.

7. If no REMARKS are needed, return the cursor to the top of the form by pressing HOME.

8. Press SEND/ENTER

   Response: `RC ORNU` *a* `SUCCESSFULLY TESTED` followed by
   `RC ORNU` *a* `SUCCESSFULLY BUFFERED` followed by all new entries.

   where *a* = RC Order Number

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat Steps 1 through 8.

9. At the 1B MTC terminal, enter **RCACT:ORNU** *a***!**

   where *a* = RC Order Number

   Response: `RC ORNU` *a* `ACTIVATED` followed by all new entries.

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat this DLP correcting the errors.

10. At the 1B MTC terminal, enter **VER:UTYPE:SCS** *x***!**

    where *x* = Member Number (0-7)

    Caution: When populating* DSKEQ *for a Type 2 (TN4000 - 4 Gb) disk pair at location 0 and/or 2, the adjacent locations 1 and/or 3 will also be populated when checking the unit type translator. This is done automatically via recent change.

    Response:
    ```
    VER:UTMN;OPT(),CUR:
    FLN a
    UTYN b
    MEMN c
    ME d
    ENTRY ADDRESS e
    ENTRY SIZE f
    ```
    The above responses are followed by a complete printout of the Service Circuit System (SCS) unit type entry data. Use this printout and Figure 1 to determine if the SCU data (MSP and disk pair equipage) was properly entered.

    where *a* = Floor location number
    b = Unit type name
    c = Member number of growth associated complex
    d = Member equipage
    e = An 8-digit entry address
    f = A 2-digit entry size

11. **STOP! YOU HAVE COMPLETED THIS PROCEDURE.**

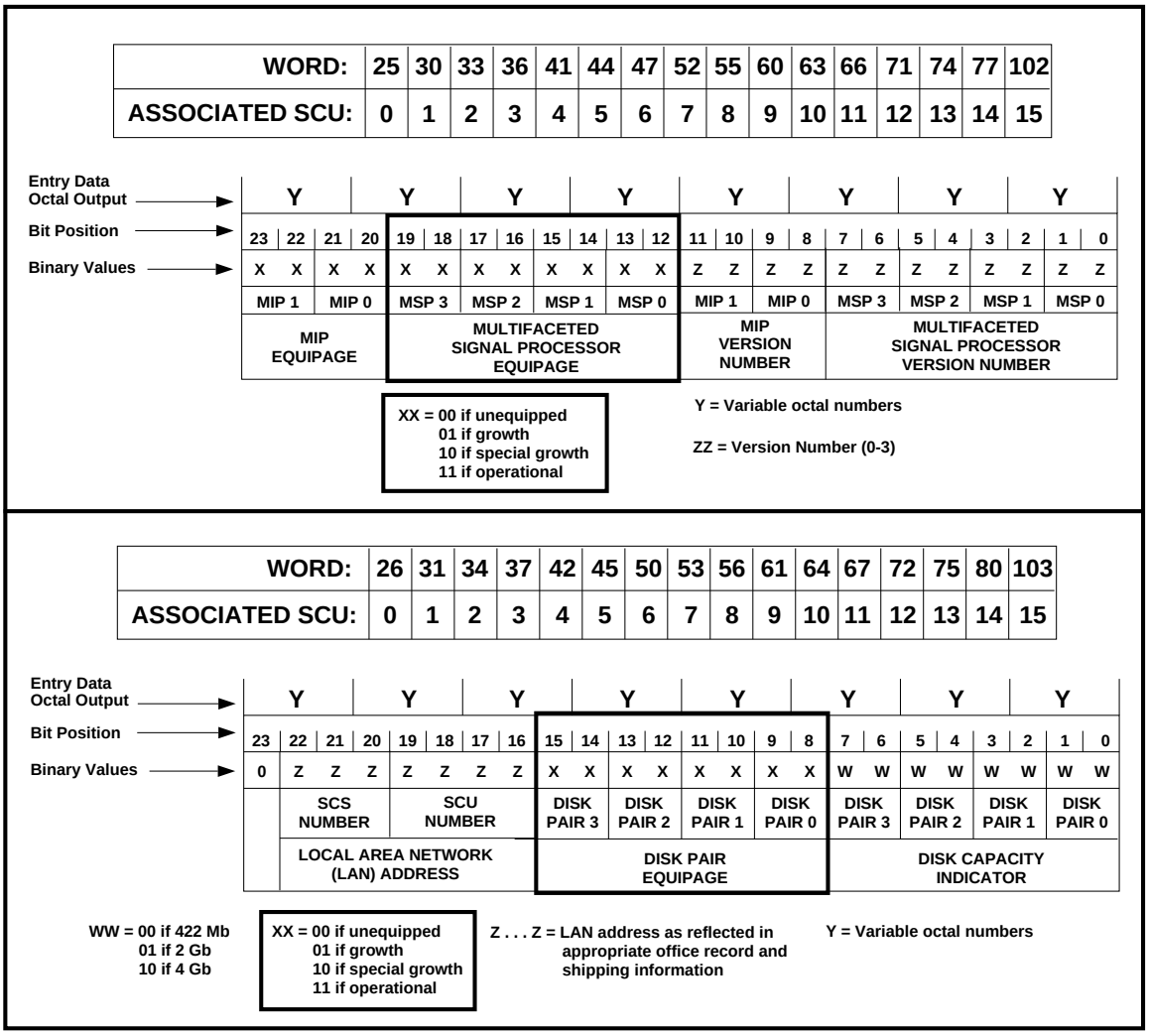

Figure 1. Words in SCS Unit Type Translator Used to Determine MSP and Disk Pair Equipage

Recent Change and Verify Connecting Breakage Time Slot Interchange (TSI) Submember Equipage From UNEQ to GROW Using Recent Change (RC) Form 700

Caution: Calling up an RC form will cause all data on the screen to be cleared.

1. At the 1B Maintenance (MTC) terminal, enter **OP:RCFORM 700!**

   Response: Recent Change Form 700 appears on the screen.

2. At UTYN, enter **TSI**.

3. At ORNU, enter a unique Order Number.

4. At MEMN, enter the Member Number.

5. At SUBMEM, enter the Submember Name (**T0PRTEQ[0-6]** for SPC0 ports 0-6, or **T1PRTEQ[0-6]** for SPC1 ports 0-6).

6. At SME, enter **UNEQ** under OLD, then enter **GROW** under NEW.

7. If no REMARKS are needed, return the cursor to the top of the form by pressing HOME.

8. Press SEND/ ENTER

   Response: RC ORNU *a* SUCCESSFULLY TESTED followed by
   RC ORNU *a* SUCCESSFULLY BUFFERED followed by all new entries.

   where *a* = RC Order Number

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat Steps 1 through 8.

9. At the 1B MTC terminal, enter **RCACT:ORNU** *a***!**
   where *a* = RC Order Number

   Response: `RC ORNU` *a* `ACTIVATED` followed by all new entries.
   where *a* = RC Order Number

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, remove recent change using RC form 701 (DLP-541) and repeat this DLP.

10. At the 1B MTC terminal, enter **VER:UTYPE:TSI** *x***,SME** *y***!**
    where *x* = Member Number (0-62)
    y = TSI Port Index Number (See Table A)

TABLE A TSI Port Index Numbers

PORT	INDEX NO.	PORT	INDEX NO.	PORT	INDEX NO.
SPC 0-0	56	SPC 0-5	61	SPC 1-3	66
SPC 0-1	57	SPC 0-6	62	SPC 1-4	67
SPC 0-2	58	SPC 1-0	63	SPC 1-5	68
SPC 0-3	59	SPC 1-1	64	SPC 1-6	69
SPC 0-4	60	SPC 1-2	65		

Response: `VER:UTMN;OPT(SME),CUR:`
`FLN` *a*
`UTYN` *b*
`MEMN` *c*
`ME` *d*
`SME` *e*
`SUBMEM` *f*

where *a* = Floor location number
b = Unit type name
c = Member number of growth associated complex
d = Member equipage
e = SubMember Equipage (SME)
f = SME index number

Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat this step using correct data.

11. **STOP! YOU HAVE COMPLETED THIS PROCEDURE.**

Recent Change and Verify Connecting Breakage Time Slot Interchange (TSI) Submember Equipage From GROW to SGRO Using Recent Change (RC) Form 700

Caution: Calling up an RC form will cause all data on the screen to be cleared.

1. At the 1B Maintenance (MTC) terminal, enter **OP:RCFORM 700!**

   Response: Recent Change Form 700 appears on the screen.

2. At UTYN, enter **TSI**.

3. At ORNU, enter a unique Order Number.

4. At MEMN, enter the Member Number.

5. At SUBMEM, enter the Submember Name (**T0PRTEQ[0-6]** for SPC0 ports 0-6, or **T1PRTEQ[0-6]** for SPC1 ports 0-6).

6. At SME, enter **GROW** under OLD, then enter **SGRO** under NEW.

7. If no REMARKS are needed, return the cursor to the top of the form by pressing HOME.

8. Press SEND/ ENTER

   Response: RC ORNU *a* SUCCESSFULLY TESTED followed by
   RC ORNU *a* SUCCESSFULLY BUFFERED followed by all new entries.

   where *a* = RC Order Number

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat Steps 1 through 8.

9. At the 1B MTC terminal, enter **RCACT:ORNU** *a***!**

   where *a* = RC Order Number

   Response: `RC ORNU` *a* `ACTIVATED` followed by all new entries.

   where *a* = RC Order Number

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, remove recent change using RC form 701 (DLP-540) and repeat this DLP.

10. At the 1B MTC terminal, enter **VER:UTYPE:TSI** *x*,**SME** *y*!

    where *x* = Member Number (0-62)
    y = TSI Port Index Number (See Table A)

TABLE A TSI Port Index Numbers

PORT	INDEX NO.	PORT	INDEX NO.	PORT	INDEX NO.
SPC 0-0	56	SPC 0-5	61	SPC 1-3	66
SPC 0-1	57	SPC 0-6	62	SPC 1-4	67
SPC 0-2	58	SPC 1-0	63	SPC 1-5	68
SPC 0-3	59	SPC 1-1	64	SPC 1-6	69
SPC 0-4	60	SPC 1-2	65		

    Response: `VER:UTMN;OPT(SME),CUR:`
    `FLN` *a*
    `UTYN` *b*
    `MEMN` *c*
    `ME` *d*
    `SME` *e*
    `SUBMEM` *f*

    where *a* = Floor location number
    b = Unit type name
    c = Member number of growth associated complex
    d = Member equipage
    e = SubMember Equipage (SME)
    f = SME index number

    Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat this step using correct data.

11. **STOP! YOU HAVE COMPLETED THIS PROCEDURE.**

Recent Change and Verify Member Equipage From SGRO to OPER Using Recent Change (RC) Form 700

Caution: Calling up an RC form will cause all data on the screen to be cleared.

1. At the 1B Maintenance (MTC) terminal, enter **OP:RCFORM 700!**

   Response: Recent Change Form 700 appears on the screen.

2. At UTYN, enter **SCS**.

3. At ORNU, enter a unique Order Number.

4. At MEMN, enter the Member Number.

5. At ME, enter **SGRO** under OLD, then enter **OPER** under NEW.

6. If no REMARKS are needed, return the cursor to the top of the form by pressing HOME.

7. Press SEND/ENTER

   Response: RC ORNU *a* SUCCESSFULLY TESTED followed by
   RC ORNU *a* SUCCESSFULLY BUFFERED followed by all new entries.

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat Steps 1 through 7.

8. At the 1B MTC terminal, enter **RCACT:ORNU** *a***!**

   where *a* = RC Order Number

   Response: `RC ORNU` *a* `ACTIVATED` followed by all new entries.

   where *a* = RC Order Number

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, remove recent change using RC form 701 and repeat this DLP.

9. At the 1B MTC terminal, enter **VER:UTYPE:SCS** *x***!**

   where *x* = Member Number (0-7)

   Response:
   ```
   VER:UTMN;OPT(),CUR:
   FLN a
   UTYN b
   MEMN c
   ME d
   ENTRY ADDRESS e
   ENTRY SIZE f
   ```

   The above responses are followed by a complete printout of the SCS unit type entry data. (Use this printout to determine if data was properly entered.)

   where *a* = Floor location number
   b = Unit type name
   c = Member number of growth associated complex
   d = Member equipage
   e = An 8-digit entry address
   f = A 2-digit entry size

10. **STOP! YOU HAVE COMPLETED THIS PROCEDURE.**

Recent Change and Verify Each Associated Disk Pair and Multifaceted Signal Processor (MSP) Equipage From SGRO to OPER Using Recent Change (RC) Form 703

Caution: Calling up an RC form will cause all data on the screen to be cleared.

1. At the 1B Maintenance (MTC) terminal, enter **OP:RCFORM 703!**

   Response: Recent Change Form 703 appears on the screen.

2. At SCS, enter growth SCS Member Number (0-7).

3. At SCU, enter the number of the growth SCU (0-15).

4. At ORNU, enter a unique Order Number.

5. At the appropriate MSBEQ locations, enter **P** (present).

   Note: If the SCU has more than one associated Multifaceted Signal Processor circuit pack (TN1589), also enter **P** at locations 1 through 3 of MSBEQ, as required.

6. At the appropriate DSKEQ locations, enter **P** (present).

   Note: If SCU 0 is being grown and has more than one associated disk pair, also enter **P** at locations 1 through 3 of DSKEQ, as required.

7. If no REMARKS are needed, return the cursor to the top of the form by pressing HOME.

8. Press SEND/ENTER

   Response: `RC ORNU a SUCCESSFULLY TESTED` followed by
   `RC ORNU a SUCCESSFULLY BUFFERED` followed by all new entries.

   where *a* = RC Order Number

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat Steps 1 through 8.

9. At the 1B MTC terminal, enter **RCACT:ORNU** *a***!**

   where *a* = RC Order Number

   Response: `RC ORNU a ACTIVATED` followed by all new entries.

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat this DLP, correcting the errors.

10. At the 1B MTC terminal, enter **VER:UTYPE:SCS x!**

    where *x* = Member Number (0-7)

    Caution: When populating* DSKEQ *for a Type 2 (TN4000 - 4 Gb) disk pair at location 0 and/or 2, the adjacent locations 1 and/or 3 will also be populated when checking the unit type translator. This is done automatically via recent change.

    Response:
    ```
    VER:UTMN;OPT(),CUR:
    FLN a
    UTYN b
    MEMN c
    ME d
    ENTRY ADDRESS e
    ENTRY SIZE f
    ```

    The above responses are followed by a complete printout of the Service Circuit System (SCS) unit type entry data. Use this printout and Figure 1 to determine if the SCU data (MSP and disk pair equipage) was properly entered.

    where *a* = Floor location number
    b = Unit type name
    c = Member number of growth associated complex
    d = Member equipage
    e = An 8-digit entry address
    f = A 2-digit entry size

11. **STOP! YOU HAVE COMPLETED THIS PROCEDURE.**

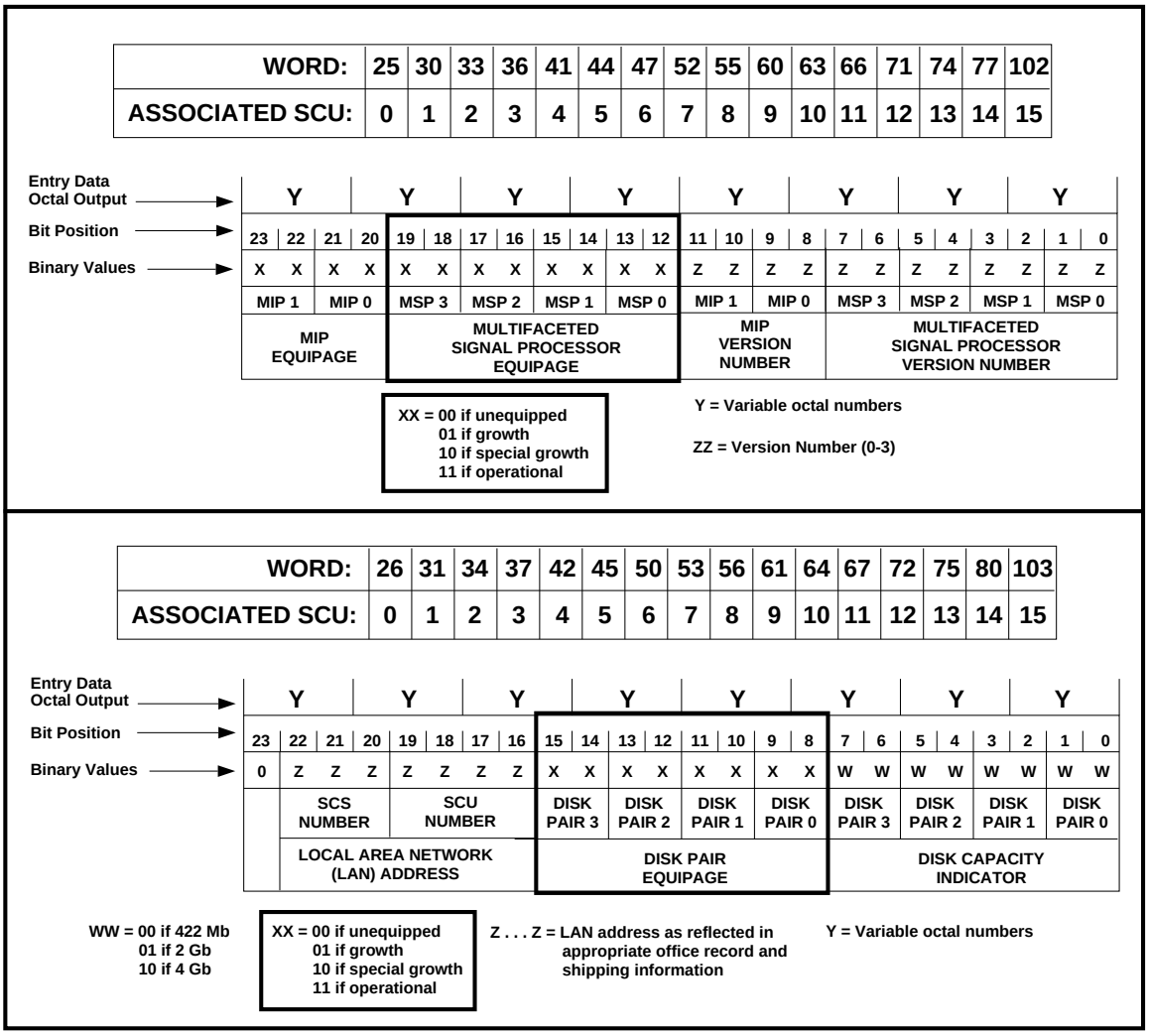

Figure 1. Words in SCS Unit Type Translator Used to Determine MSP and Disk Pair Equipage

Recent Change and Verify Submember Equipage From SGRO to OPER Using Recent Change (RC) Form 700

Caution: Calling up an RC form will cause all data on the screen to be cleared.

1. At the 1B Maintenance (MTC) terminal, enter **OP:RCFORM 700!**

   Response: Recent Change Form 700 appears on the screen.

2. At UTYN, enter **SCS**.

3. At ORNU, enter a unique Order Number.

4. At MEMN, enter the Member Number.

5. At SUBMEM, enter the Submember Name (**SCUEQ[0-15]**, where 0-15 is the SCU number).

6. At SME, enter **SGRO** under OLD, then enter **OPER** under NEW.

7. If no REMARKS are needed, return the cursor to the top of the form by pressing HOME.

8. Press SEND/ENTER

   Response: RC ORNU *a* SUCCESSFULLY TESTED followed by
   RC ORNU *a* SUCCESSFULLY BUFFERED followed by all new entries.

   where *a* = RC Order Number

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat Steps 1 through 8.

9. At the 1B MTC terminal, enter **RCACT:ORNU** *a***!**

   where *a* = RC Order Number

   Response: `RC ORNU` *a* `ACTIVATED` followed by all new entries.

   where *a* = RC Order Number

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, remove recent change using RC form 701 (DLP-513) and repeat this DLP.

10. At the 1B MTC terminal, enter **VER:UTYPE:SCS** *x*,**SME** *y*!

    where *x* = Member Number (0-7)
    y = SCU Index Number (See Table A)

TABLE A SCU Index Numbers

SCU	INDEX NO.	SCU	INDEX NO.	SCU	INDEX NO.	SCU	INDEX NO.
0	177	4	181	8	185	12	189
1	178	5	182	9	186	13	190
2	179	6	183	10	187	14	191
3	180	7	184	11	188	15	192

Response:
```
VER:UTMN;OPT(SME),CUR:
FLN a
UTYN b
MEMN c
ME d
SME e
SUBMEM f
```

where *a* = Floor location number
b = Unit type name
c = Member number of growth associated complex
d = Member equipage
e = SubMember Equipage (SME)
f = SME index number

Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat this step using correct data.

11. **STOP! YOU HAVE COMPLETED THIS PROCEDURE.**

Recent Change and Verify Connecting Breakage Time Slot Interchange (TSI) Submember Equipage From SGRO to OPER Using Recent Change (RC) Form 700

Caution: Calling up an RC form will cause all data on the screen to be cleared.

1. At the 1B MTC terminal, enter **OP:RCFORM 700!**

   Response: Recent Change Form 700 appears on the screen.

2. At UTYN, enter **TSI**.

3. At ORNU, enter a unique Order Number.

4. At MEMN, enter the Member Number.

5. At SUBMEM, enter the Submember Name (**T0PRTEQ[0-6]** for SPC0 ports 0-6, or **T1PRTEQ[0-6]** for SPC1 ports 0-6).

6. At SME, enter **SGRO** under OLD, then enter **OPER** under NEW.

7. If no REMARKS are needed, return the cursor to the top of the form by pressing HOME.

8. Press SEND/ ENTER

   Response: RC ORNU *a* SUCCESSFULLY TESTED followed by
   RC ORNU *a* SUCCESSFULLY BUFFERED followed by all new entries.

   where *a* = RC Order Number

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat Steps 1 through 8.

9. At the 1B MTC terminal, enter **RCACT:ORNU** *a***!**

   where *a* = RC Order Number

   Response: `RC ORNU` *a* `ACTIVATED` followed by all new entries.

   where *a* = RC Order Number

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, remove recent change using RC form 701 (DLP-539) and repeat this DLP.

10. At the 1B MTC terminal, enter **VER:UTYPE:TSI** *x*,**SME** *y*!

    where *x* = Member Number (0-62)
    y = TSI Port Index Number (See Table A)

TABLE A TSI Port Index Numbers

PORT	INDEX NO.	PORT	INDEX NO.	PORT	INDEX NO.
SPC 0-0	56	SPC 0-5	61	SPC 1-3	66
SPC 0-1	57	SPC 0-6	62	SPC 1-4	67
SPC 0-2	58	SPC 1-0	63	SPC 1-5	68
SPC 0-3	59	SPC 1-1	64	SPC 1-6	69
SPC 0-4	60	SPC 1-2	65		

Response:
```
VER:UTMN;OPT(SME),CUR:
FLN a
UTYN b
MEMN c
ME d
SME e
SUBMEM f
```

where *a* = Floor location number
b = Unit type name
c = Member number of growth associated complex
d = Member equipage
e = SubMember Equipage (SME)
f = SME index number

Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat this step using correct data.

11. **STOP! YOU HAVE COMPLETED THIS PROCEDURE.**

Verify Service Circuit System (SCS) Unit Type Translator for the Growth SCS Complex

Note: If, during this procedure, the value of any of the words in the unit type translator are not what they should be, DLP-515 can be used to perform a functional word change. However, remember that, depending on local procedures, supervisory or TELCO engineering approval must be obtained prior to performing any data change.

1. At the 1B Maintenance (MTC) terminal, enter **VER:UTYPE:SCS** *x***!**

   where *x* = Member Number (0-7)

   Response: The information shown in Figure 1 is displayed.

   Note: The words shown in Figure 1 are in **octal** format.

VER:UTMN;OPT(),CUR: **FLN** *a* **UTYN** *b*

MEMN *c* **ME** *d*
ENTRY ADDRESS *e* **ENTRY SIZE** *f*

CUR				
WORD 0	_____ _____	_____ _____	_____ _____	_____ _____
WORD 10	_____ _____	_____ _____	_____ _____	_____ _____
WORD 20	_____ _____	_____ _____	_____ _____	_____ _____
WORD 30	_____ _____	_____ _____	_____ _____	_____ _____
WORD 40	_____ _____	_____ _____	_____ _____	_____ _____
WORD 50	_____ _____	_____ _____	_____ _____	_____ _____
WORD 60	_____ _____	_____ _____	_____ _____	_____ _____
WORD 70	_____ _____	_____ _____	_____ _____	_____ _____
WORD 100	_____	_____	_____	_____

a **= Floor location number**
b **= Unit type name**
c **= Member number of growth associated complex**
d **= Member equipage**
e **= 8-digit entry address**
f **= 2-digit entry size**

Figure 1. SCS Unit Type Translator

2. Is the message format and member identification correct as shown in Figure 1?

   If **Yes**, continue with Step 3.

   If **No**, determine and resolve the cause and repeat from Step 1.

3. Using TTY output and Figure 2 (pages 10 and 12), check that growth member/submember equipage bits per words 0 and 12 are set to 0.

   If these bits are **set to 0**, continue with Step 4.

   If these bits are **not set to 0**, do one of the following:

   Use RC form 701 to degrow submember equipage to unequipped (see DLP-513 [OPER to SGRO], DLP-535 [SGRO to GROW], and/or DLP-536 [GROW to UNEQ], depending on current equipage). If needed, also degrow member equipage to unequipped (see DLP-514 [OPER to SGRO], DLP-537 [SGRO to GROW], and/or DLP-538 [GROW to UNEQ], depending on current equipage).

   or

   Use RC form 801 to perform a functional word change to change the desired bits to 0 (DLP-515).

   Note: Submember equipage must be degrown first, if required, followed by degrowth of member equipage, if required.

   Caution: Depending on local procedures, supervisory or TELCO engineering approval must be obtained prior to performing any data change.

4. Using TTY output and Figure 2 (page 12), verify growth SCS controller version number bits per word 10. The version number bits found in word 10 should be set to 0.

   If these bits are **set to 0**, continue with Step 5.

   If these bits are **not set to 0**, use RC form 801 to perform a functional word change to correct the version error (DLP-515).

   Caution: Depending on local procedures, supervisory or TELCO engineering approval must be obtained prior to performing any data change.

5. Using TTY output and Figure 2 (page 15), verify growth SCU version numbers per the words listed in Table A. Table A lists the words which are used to verify the associated SCU version number.

   If the version number values for the words listed in Table A, are **set to 0**, continue with Step 6.

   If these values are **not set to 0**, use RC form 801 to perform a functional word change to correct the version error (DLP-515).

   Caution: Depending on local procedures, supervisory or TELCO engineering approval must be obtained prior to performing any data change.

TABLE A Octal Words and Associated SCUs for SCU Version Number Determination

SCU	Word	SCU	Word	SCU	Word	SCU	Word
0	24	4	40	8	54	12	70
1	27	5	43	9	57	13	73
2	32	6	46	10	62	14	76
3	35	7	51	11	65	15	101

6. Using TTY output and Figure 2 (page 15), verify growth Multifaceted Signal Processor (MSP) version numbers per the words listed in Table B. Table B lists the words which are used to verify the associated MSP version number for each of the 16 SCUs.

   If the version number values for the words listed in Table B are **set to 0**, continue with Step 7.

   If these values are **not set to 0**, use RC form 801 to perform a functional word change to correct the version error (DLP-515).

   Caution: Depending on local procedures, supervisory or TELCO engineering approval must be obtained prior to performing any data change.

TABLE B Octal Words and Associated SCUs for MSP Version Number Determination

SCU	Word	SCU	Word	SCU	Word	SCU	Word
0	25	4	41	8	55	12	71
1	30	5	44	9	60	13	74
2	33	6	47	10	63	14	77
3	36	7	52	11	66	15	102

7. Using the TTY output and Figure 2 (page 12), verify the growth member class AC/B version record of word 11, and note any discrepancies. (Word 11 should be all zeros.)

8. Using the TTY output and Figure 2 (page 10), verify miscellaneous member type data per word 0, bits 18 through 23, and note any discrepancies.

9. Using the TTY output and Figure 2 (page 10), verify the alarm grid number, frame lineup number, and frame number for the growth frame per word 1 as follows:

    1. Convert octal digits of entry output data word 1 to binary.
    2. Determine decimal number of alarm grid number, frame lineup number, and frame number.
    3. Compare calculated data with office records and floor plan drawings as required.
    4. Record any discrepancies.

10. Using the TTY output and Figure 2 (page 10), verify the Peripheral Unit Bus (PUB) branch assignment of the growth frame per word 3 as follows:

    1. Convert the two leftmost octal digits of entry output data word 3 to binary.
    2. Record the values of bits 19 through 21.
    3. Use Table C to determine what the PUB branch letter should be for the 3-digit code of bits 19 through 21.
    4. Compare the PUB branch letter determined in the previous step with the letter found in the appropriate office record drawing (T-3840).
    5. If any discrepancies are found in the branch letters, use RC form 801 to perform a functional word change to correct the error (DLP-515).

Caution: Depending on local procedures, supervisory or TELCO engineering approval must be obtained prior to performing any data change.

TABLE C PUB Branch Letter Determination

3-Digit Code	PUB Branch Letter
000	A or B
001	C or D
010	E or F
011	G or H
100	K or L
101	M or R
110	T or V
111	W or X

11. Using the TTY output and Figure 2 (beginning on page 10), verify the Pulse Point and Signal Distributor (SD) assignments for the growth frame per words 2, 5, 6, 7, 17, 20, 21, and 22 as follows:

    1. Convert octal digits of entry output data words to decimal Signal Processor (SP) member, row, and column numbers and record results. If the fourth rightmost octal digit of a word is **2** or **3**, add decimal 64 to the SP row number determined for that word.
    2. Search the **ROW** and **COLUMN** listings in the appropriate office record drawings (PTAGS) and locate the row and column previously recorded for each of the indicated words. If the associated **UNIT TYPE** and **FRM NO** does not agree with the growth frame, record the discrepancy for later use.

12. Using the TTY output and Figure 2 (beginning on page 10), verify the scan point assignments for the growth frame per words 3, 4, 13, 14, 15, 16, and 23 as follows:

    1. Convert octal digits of entry output data words to decimal SP member, row, and column numbers and record results. If the fourth rightmost octal digit of a word is **2** or **3**, add decimal 64 to the SP row number determined for that word.
    2. Search the **ROW** and **COLUMN** listings in the appropriate office record drawings (PTAGS) and locate the row and column previously recorded for each of the indicated words. If the associated **UNIT TYPE** and **FRM NO** does not agree with the growth frame, record the discrepancy for later use.

13. Using the TTY output and Figure 2 (page 15), verify the Service Circuit type for each growth SCU, per the words listed in Table D. Each word listed in Table D represents the associated SCU.

    Note: Prior to this verification, you must know which announcement set is assigned to each growth SCU.

TABLE D Octal Words and Associated SCUs for Service Circuit Type Determination

SCU	Word	SCU	Word	SCU	Word	SCU	Word
0	24	4	40	8	54	12	70
1	27	5	43	9	57	13	73
2	32	6	46	10	62	14	76
3	35	7	51	11	65	15	101

14. Using the TTY output and Figure 2 (page 15), verify the growth SCU to Time Slot Interchange (TSI) port assignment per the words listed in Table E. Each word listed in Table E represents the associated SCU.

    1. Convert the octal digits representing TSI information to decimal for each of the words listed in Table E.
    2. For each of the words in Table E, compare the calculated data for the TSI member number, SPC, and TSI port number to the appropriate office records containing SCU to TSI port assignments, and record any discrepancies.

    TABLE E Octal Words and Associated SCUs for SCU to TSI Port Assignment

SCU	Word	SCU	Word	SCU	Word	SCU	Word
0	24	4	40	8	54	12	70
1	27	5	43	9	57	13	73
2	32	6	46	10	62	14	76
3	35	7	51	11	65	15	101

15. Using the TTY output and Figure 2 (page 10), verify the Generate Control Pulse Point (GCP) Indicator and the Generate Control Pulse Point Index per word 2, and note any discrepancies. (The binary value for each of these items should be zero.)

16. Using the TTY output and Figure 2 (page 10), verify the Master Control Complex (MCC) Indicator and the Fan Out Indicator per word 3, and note any discrepancies. (The binary value for the MCC Indicator should be zero and the binary value for the Fan Out Indicator should be 1.)

17. Using the TTY output and Figure 2 (page 11), verify the following items per word 4, and note any discrepancies. (The binary value for each of these items should be zero.)

    - MCC Indicator for BBMSN (BMCCI)
    - Repeater Indicator (RPI)
    - PUBB Extension Frame (REPEATN)
    - PUBB Extension Frame Circuit Number (REPCKT)
    - PUBB Extension Frame Circuit Half (RCKTHLF).

18. Using the TTY output and Figure 2 (page 15), verify that growth MSP equipage bits are set to 0 for each of the words listed in Table F, and note any discrepancies. Table F lists the words which are used to verify the associated MSP equipage for each of the 16 SCUs.

TABLE F Octal Words and Associated SCUs for MSP Equipage Verification

SCU	Word	SCU	Word	SCU	Word	SCU	Word
0	25	4	41	8	55	12	71
1	30	5	44	9	60	13	74
2	33	6	47	10	63	14	77
3	36	7	52	11	66	15	102

19. Using the TTY output and Figure 2 (page 15), verify that the growth Disk Capacity and Disk Pair Equipage bits for each associated word listed in Table G, match office hardware, and note any discrepancies. Disk **capacity** *bits for growth SCUs should be* **00** *for 422 MB disk pairs (TN1672 circuit packs) or* **01** *for 2 GB disk pairs (TN1972 circuit packs), or* **10** *for 4 GB disk pairs (TN4000 circuit packs). Disk* **equipage** *bits for growth SCUs should be* **00***.*

Note: Prior to this verification, you must know the capacity of each growth SCU disk pair.

TABLE G Octal Words and Associated SCUs for Disk Capacity, Disk Pair Equipage, and LAN Address Verification

SCU	Word	SCU	Word	SCU	Word	SCU	Word
0	26	4	42	8	56	12	72
1	31	5	45	9	61	13	75
2	34	6	50	10	64	14	80
3	37	7	53	11	67	15	103

Caution: SCU 0 can physically support 4 disk pairs (0, 1, 2, and 3). When populating disk capacity bits for SCU 0, adhere to the following rules:

- ***Type 0 (TN1672 circuit packs) can be populated in all 4 disk pair locations.***
- ***Type 1 (TN1972 circuit packs) can only be populated in 3 of 4 disk pair locations.***
- ***Type 2 (TN4000 circuit packs) can only be populated as shown in Table H.***

TABLE H Allowable Disk Pair Configurations When Using Type 2 (TN4000) Circuit Packs With SCU 0

Allowable Disk Pair Types			
Location 0	**Location 1**	**Location 2**	**Location 3**
2	X		
2	X	0	
2	X	0	0
2	X	1	
2	X	0	1
2	X	1	0
0	0	2	X
0	1	2	X
1	0	2	X
Where "X" indicates disk pair locations that **must be unpopulated**.			

20. Using the TTY output and Figure 2 (page 15), verify the LAN address for each growth SCU by looking at the words listed in Table G, and note any discrepancies (the LAN address should be the SCS member number multiplied by 16, plus the growth SCU number). Table G lists the words which are used to verify this information for each of the 16 SCUs.

21. Were any discrepancies found in Steps 7 through 20?

    If **No**, continue to Step 25.

    If **Yes**, refer problem(s) to installer to determine error and decide on corrective action. Continue to Step 22.

22. Was the error found to be in the Unit Type entry data or the office records?

    If **office records**, notify the appropriate engineering organizaion, and continue to Step 25.

    If **Unit Type entry data**, continue to Step 23.

23. Assist the installer in taking appropriate corrective action as determined by regional engineering and as approved by office supervisor.

24. Have all Unit Type data errors now been corrected?

    If **No**, return to Step 23.

    If **Yes**, continue to Step 25.

25. **STOP! YOU HAVE COMPLETED THIS PROCEDURE.**

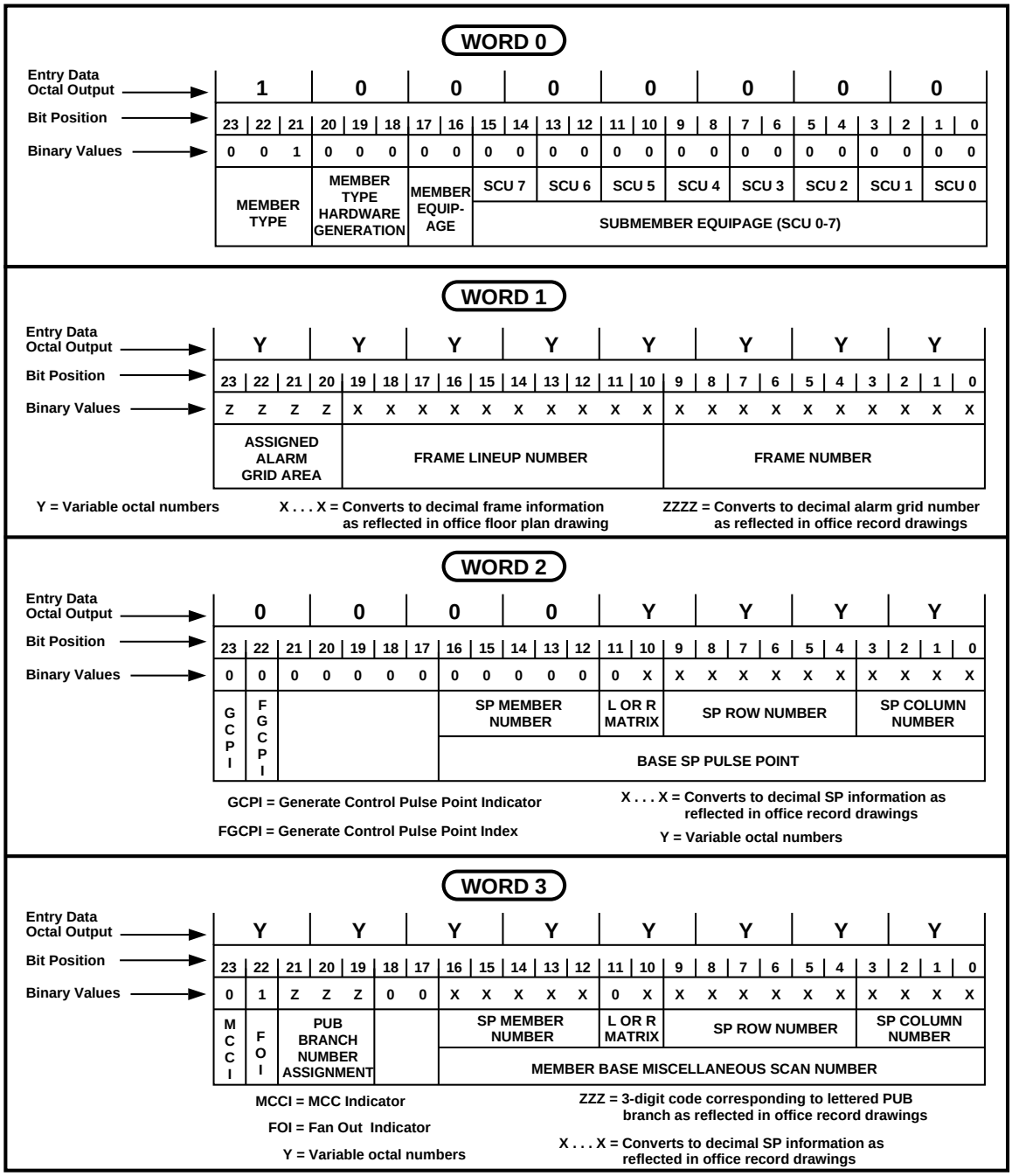

Figure 2. Unit Type Entry Data and Word Configuration (Word Numbers are in Octal)

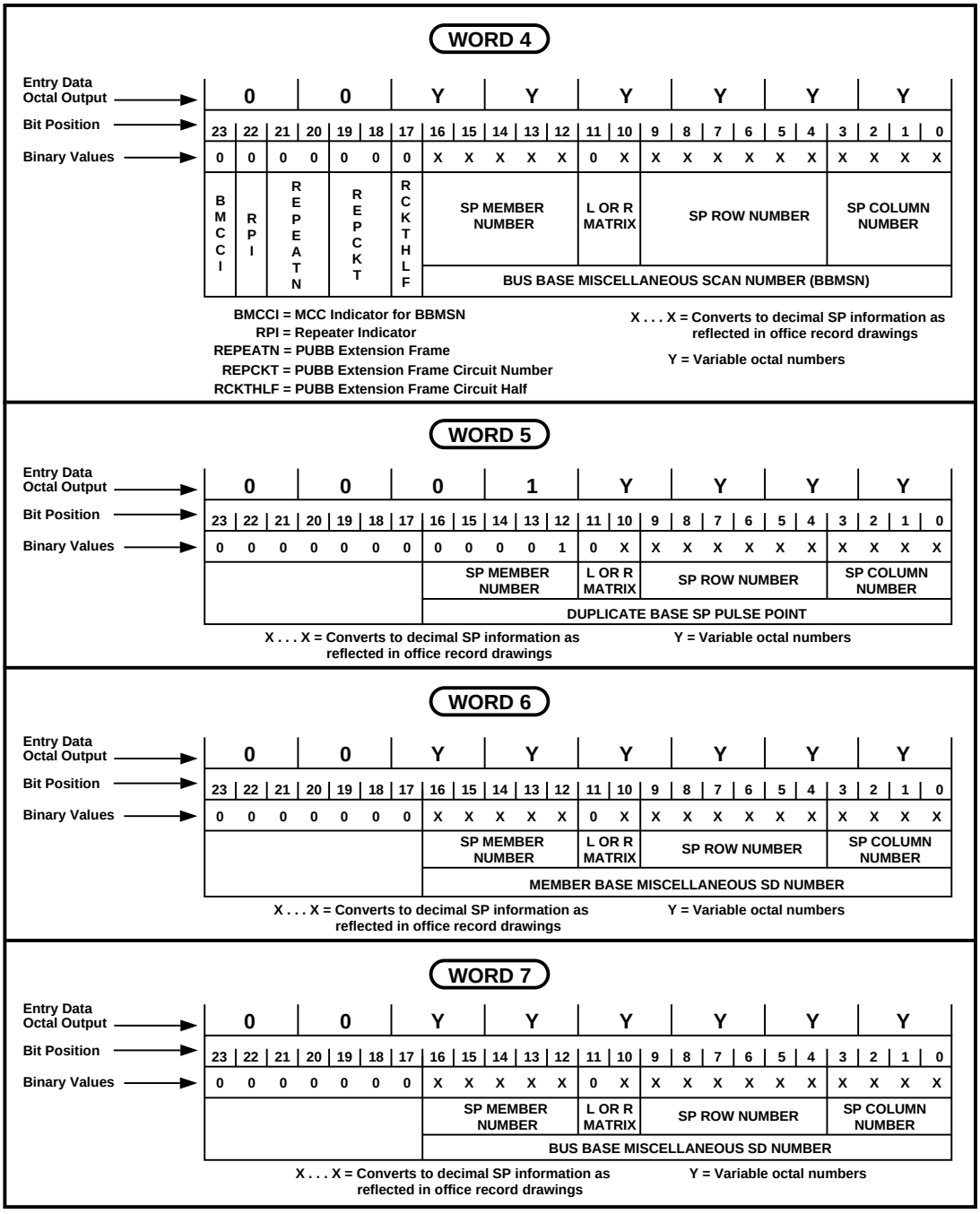

Figure 2. Unit Type Entry Data and Word Configuration (Word Numbers are in Octal) (Contd.)

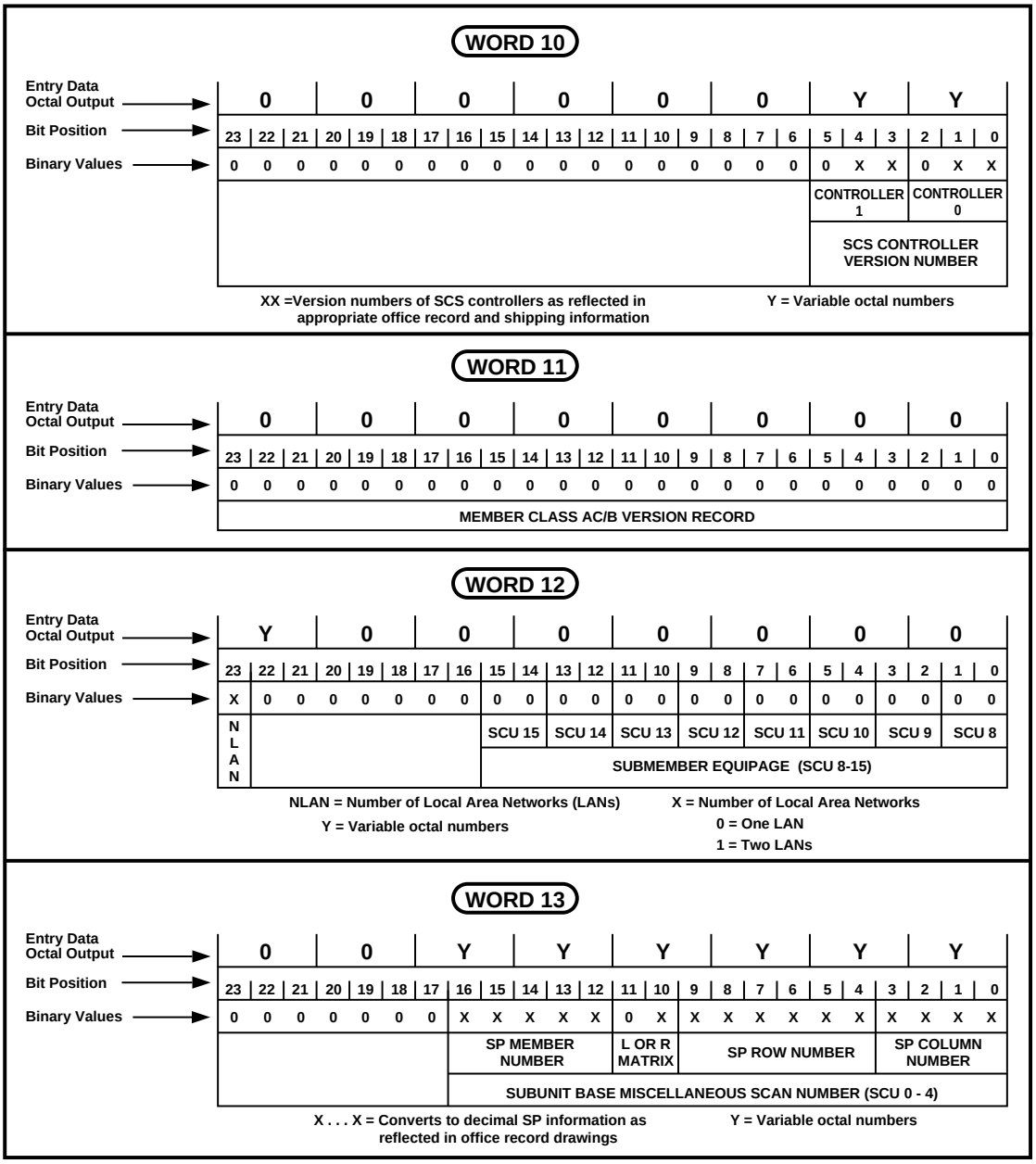

Figure 2. Unit Type Entry Data and Word Configuration (Word Numbers are in Octal) (Contd.)

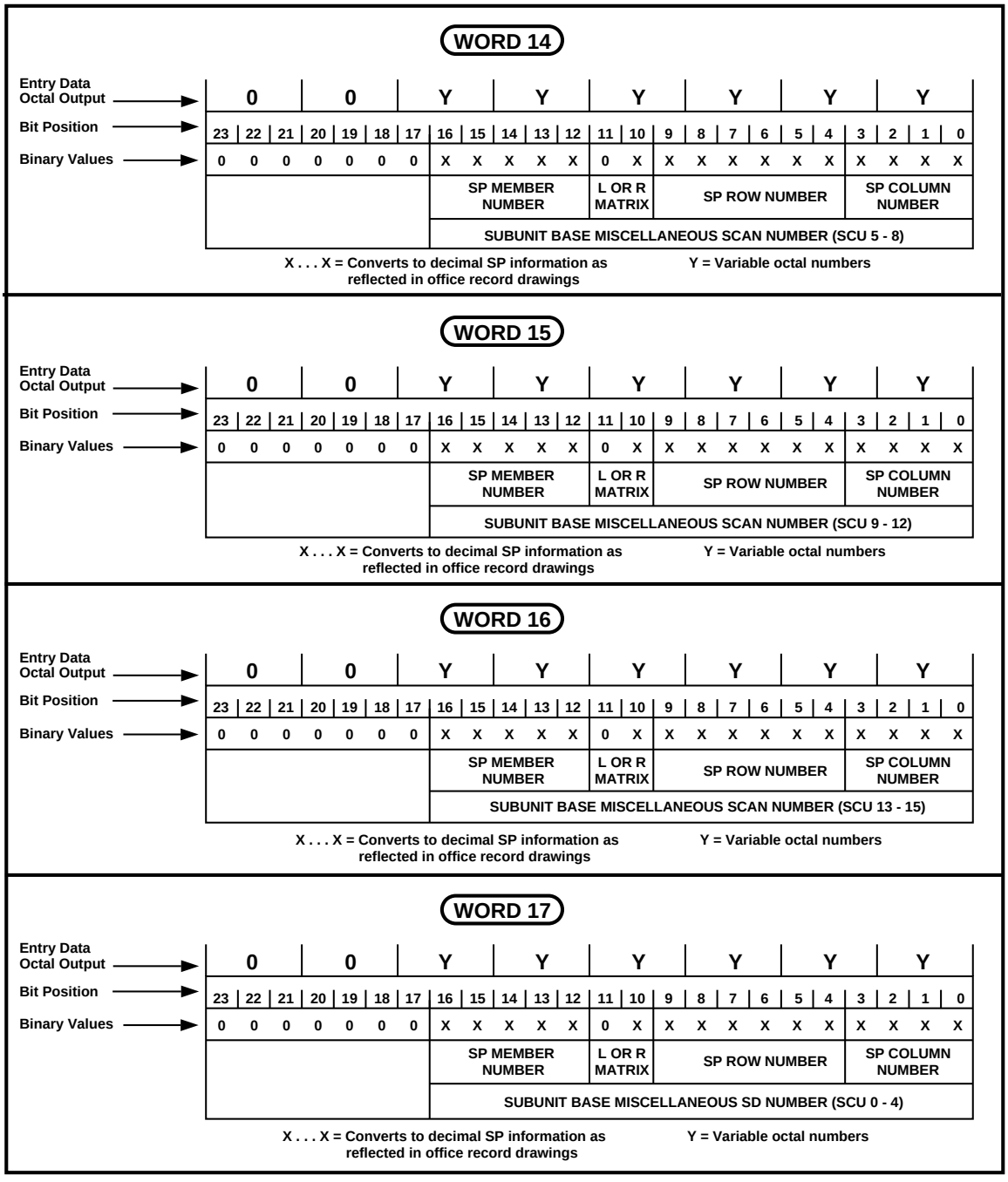

Figure 2. Unit Type Entry Data and Word Configuration (Word Numbers are in Octal) (Contd.)

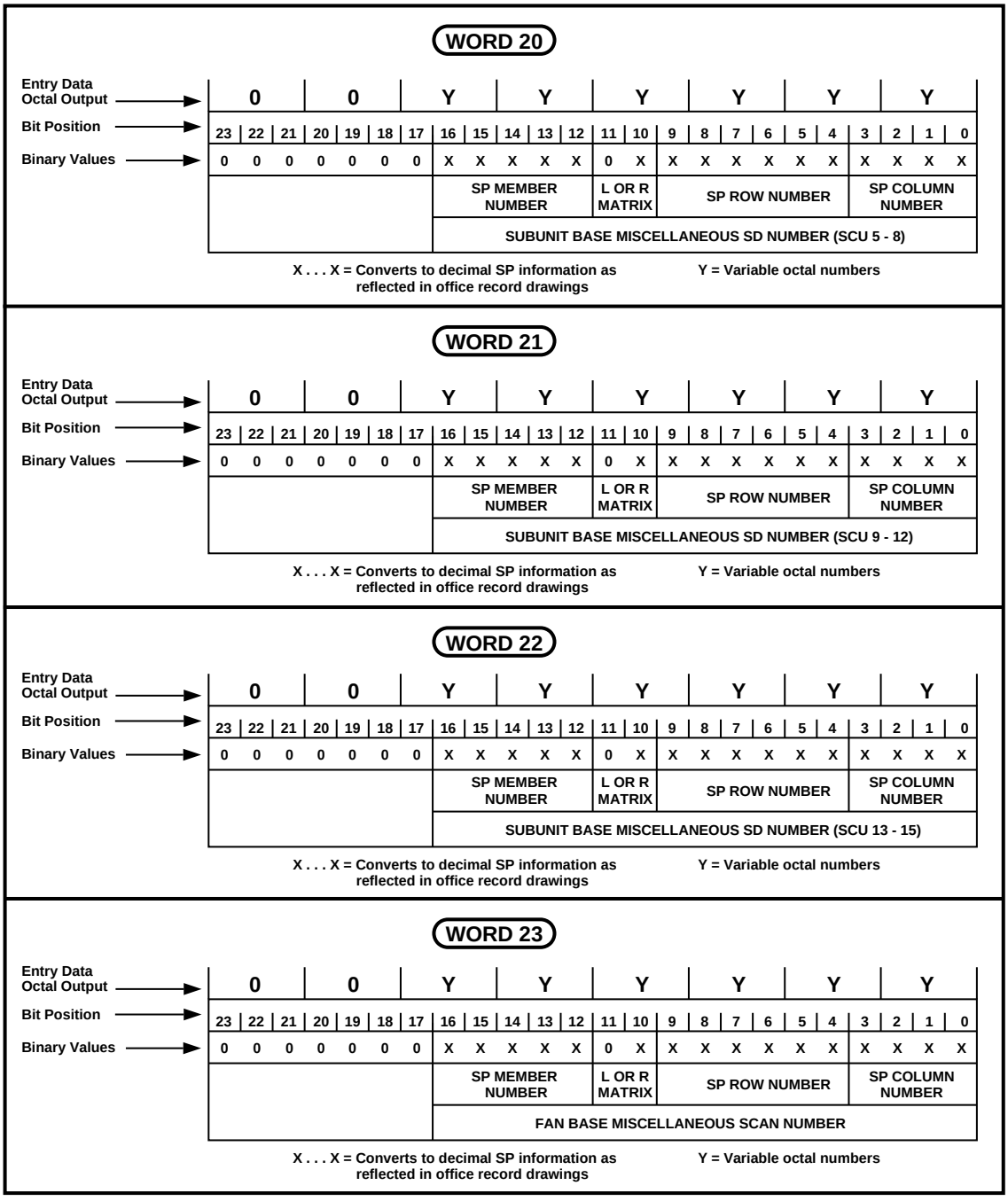

Figure 2. Unit Type Entry Data and Word Configuration (Word Numbers are in Octal) (Contd.)

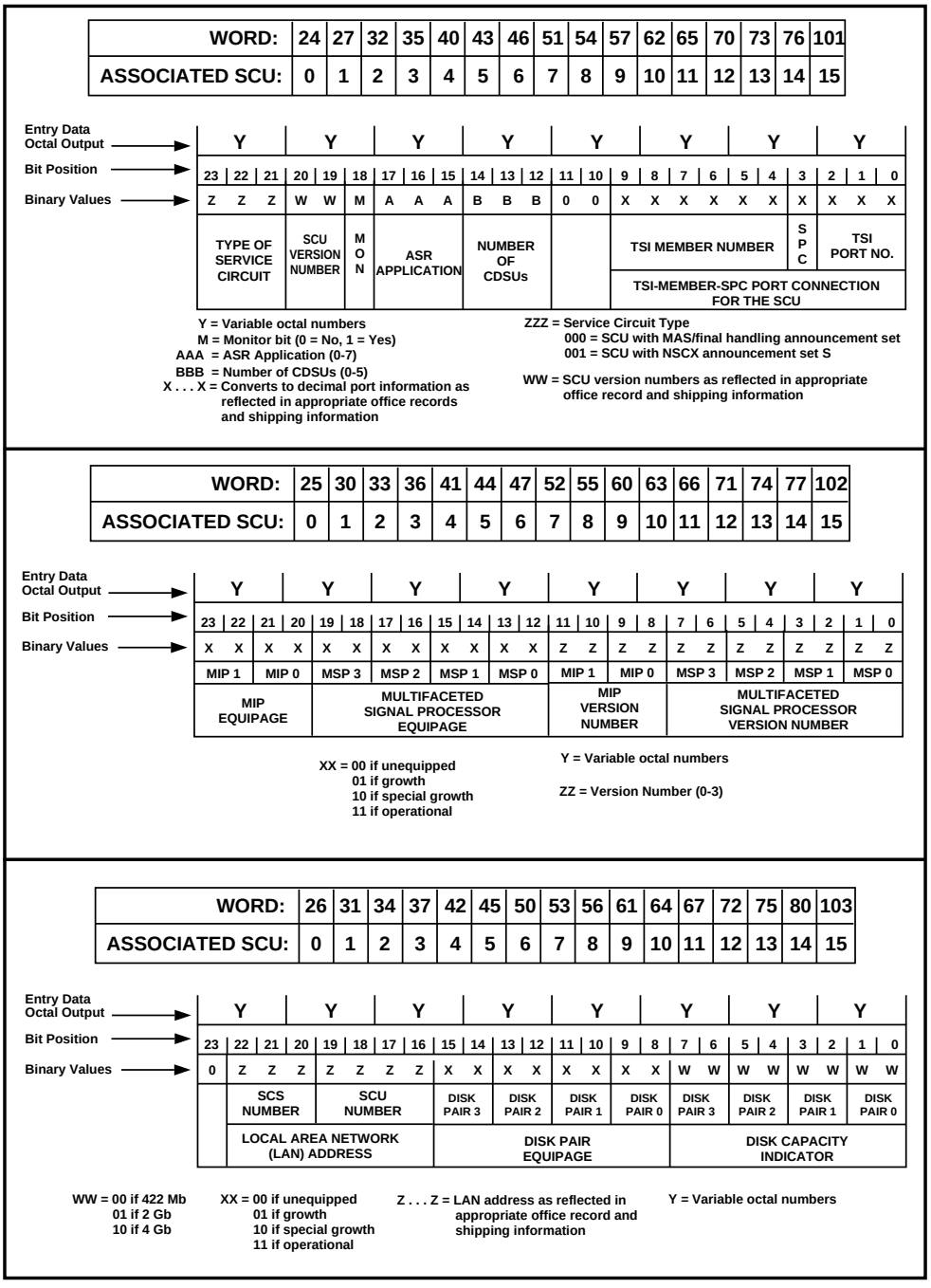

Figure 2. Unit Type Entry Data and Word Configuration (Word Numbers are in Octal) (Contd.)

Recent Change and Verify Submember Equipage From OPER to SGRO Using Recent Change (RC) Form 701 (Degrow)

Caution: Calling up an RC form will cause all data on the screen to be cleared.

1. At the 1B Maintenance (MTC) terminal, enter **OP:RCFORM 701!**

   Response: Recent Change Form 701 appears on the screen.

2. At `UTYN`, enter Unit Type (**SCS**).

3. At `ORNU`, enter a unique Order Number.

4. At `MEMN`, enter the Member Number.

5. At `SUBMEM`, enter the Submember Name (**SCUEQ[0-15]**, where 0-15 is the SCU number).

6. At `SME`, enter **OPER**, then enter **SGRO**.

7. If no `REMARKS` are needed, return the cursor to the top of the form by pressing HOME.

8. Press SEND/ENTER

   Response: `RC ORNU` *a* `SUCCESSFULLY TESTED` followed by
   `RC ORNU` *a* `SUCCESSFULLY BUFFERED` followed by all new entries.

   where *a* = RC Order Number

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat Steps 1 through 8.

9. At the 1B MTC terminal, enter **RCACT:ORNU** *a***!**

   where *a* = RC Order Number

   Response: `RC ORNU` *a* `ACTIVATED` followed by all new entries.

   where *a* = RC Order Number

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, remove recent change using RC form 700 and repeat this DLP.

10. At the 1B MTC terminal, enter **VER:UTYPE:SCS** *x***,SME** *y***!**

    where *x* = Member Number (0-7)
    y = SCU Index Number (See Table A)

TABLE A SCU Index Numbers

SCU	INDEX NO.	SCU	INDEX NO.	SCU	INDEX NO.	SCU	INDEX NO.
0	177	4	181	8	185	12	189
1	178	5	182	9	186	13	190
2	179	6	183	10	187	14	191
3	180	7	184	11	188	15	192

Response:

```
VER:UTMN;OPT(SME),CUR:        FLN a              UTYN b

MEMN c          ME d

SUBMEM e,      SME f
```

where *a* = Floor location number
b = Unit type name
c = Member number of growth associated complex
d = Member equipage
e = SCU Index number
f = Submember equipage

Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat this DLP using correct data.

11. **STOP! YOU HAVE COMPLETED THIS PROCEDURE.**

Recent Change and Verify Member Equipage From OPER to SGRO Using Recent Change Form 701 (Degrow)

Caution: Calling up an RC form will cause all data on the screen to be cleared.

1. At the 1B Maintenance (MTC) terminal, enter **OP:RCFORM 701!**

   Response: Recent Change Form 701 appears on the screen.

2. At UTYN, enter Unit Type (**SCS**).

3. At ORNU, enter a unique Order Number.

4. At MEMN, enter the Member Number.

5. At ME, enter **OPER**, then enter **SGRO**.

6. If no REMARKS are needed, return the cursor to the top of the form by pressing HOME.

7. Press SEND/ENTER

   Response: RC ORNU *a* SUCCESSFULLY TESTED followed by
   RC ORNU *a* SUCCESSFULLY BUFFERED followed by all new entries.

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat Steps 1 through 7.

8. At the 1B MTC terminal, enter **RCACT:ORNU** *a***!**

   where *a* = RC Order Number

   Response: `RC ORNU` *a* `ACTIVATED` followed by all new entries.

   where *a* = RC Order Number

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, remove recent change using RC form 700 and repeat this DLP.

9. At the 1B MTC terminal, enter **VER:UTYPE:SCS** *x***!**

   where *x* = Member Number (0-7)

   Response:
   ```
   VER:UTMN;OPT(),CUR:
   FLN a
   UTYN b
   MEMN c
   ME d
   ENTRY ADDRESS e
   ENTRY SIZE f
   ```

   The above responses are followed by a complete printout of the SCS unit type entry data. (Use this printout to determine if data was properly entered.)

   where *a* = Floor location number
   b = Unit type name
   c = Member number of growth associated complex
   d = Member equipage
   e = An 8-digit entry address
   f = A 2-digit entry size

10. **STOP! YOU HAVE COMPLETED THIS PROCEDURE.**

Perform Functional Word Change to Correct Unit Type Translator, Then Verify

Caution: Calling up a Recent Change (RC) Form will cause all data on the screen to be cleared.

1. At the 1B Maintenance (MTC) terminal, enter **OP:RCFORM 801!**

   Response: Recent Change Form 801 appears on the screen.

2. At `RC:FUNC;CHG;OPT(TRANS)`, enter **TST**.

3. At `TRANSID`, enter **UTSCS**.

4. At `ORNU`, enter a unique Order Number assigned to this word change.

5. At `ENTRY`, enter the member number of the growth member requiring Unit Type translator change.

6. At `WORDNO`, enter the decimal number of the Unit Type translator word to be changed.

7. Determine the quantity of consecutive bits which span all bits requiring change in this Unit Type translator word (see example in Figure 1). At `SIZE`, enter this **decimal** number.

8. Determine the bit position number (range 0 to 23) identifying the rightmost of the consecutive bits determined in Step 7 (see example in Figure 1). At `DISP`, enter this bit position number.

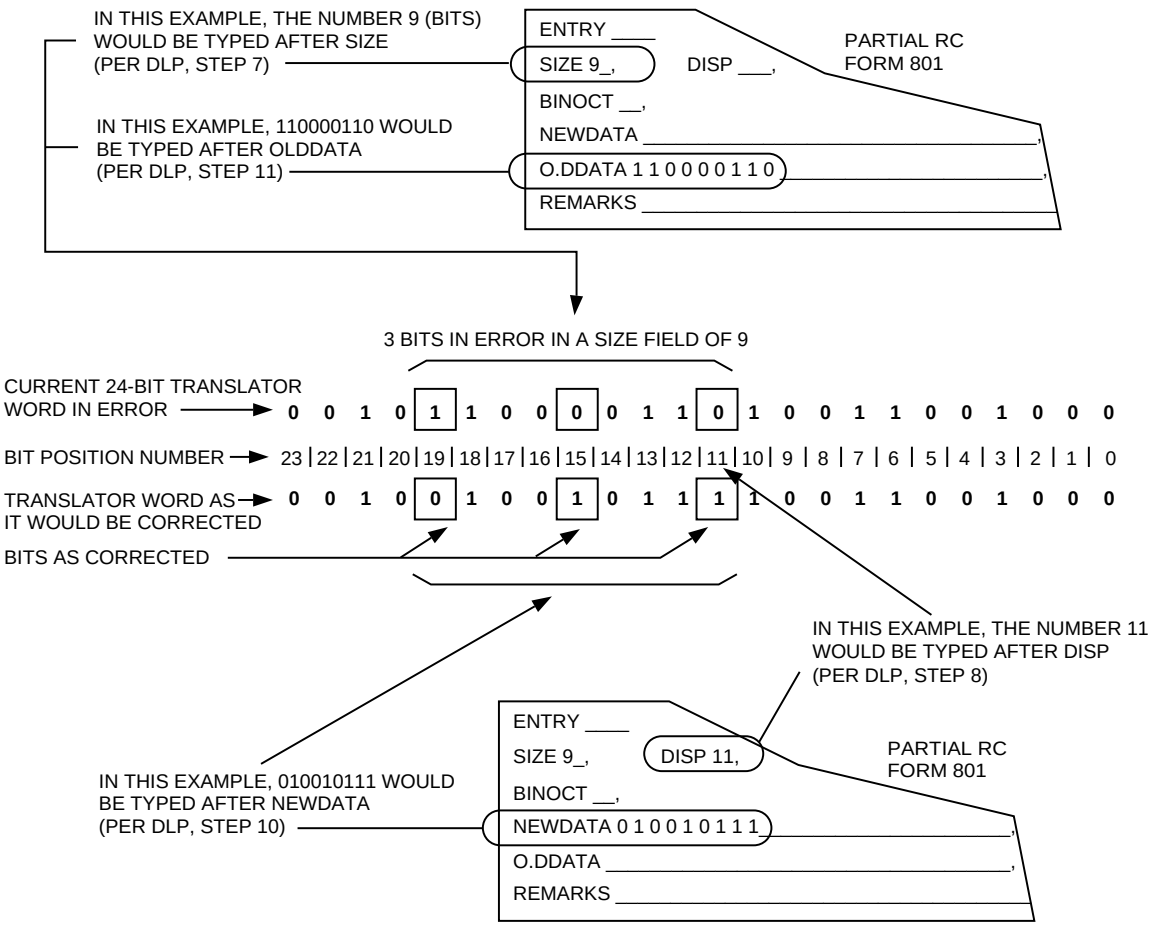

Figure 1. Functional Word Change Example

9. At `BINOCT`, enter **B**.

10. Determine the binary bits to be inserted into the Unit Type translator word to correct that word (see example in Figure 1). At `NEWDATA`, enter these binary bits.

    Note: The quantity of these binary bits must be equal to the decimal number entered as `SIZE` in Step 7.

11. At OLDDATA, enter the current binary of only that portion of the Unit Type translator word requiring change (see example in Figure 1).

    Note: The quantity of binary bits to be entered as OLDDATA must be equal to the quantity of bits entered as NEWDATA in Step 10.

12. If no REMARKS are needed, return the cursor to the top of the form by pressing HOME.

13. Press SEND/ENTER

    Response: RC ORNU *a* SUCCESSFULLY TESTED followed by
    RC ORNU *a* SUCCESSFULLY BUFFERED followed by all new entries.

    where *a* = RC Order Number

    Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat Steps 1 through 13.

14. At the 1B MTC terminal, enter **RCACT:ORNU *a*!**

    where *a* = RC Order Number

    Response: RC ORNU *a* ACTIVATED followed by all new entries.

    where *a* = RC Order Number

15. **STOP! YOU HAVE COMPLETED THIS PROCEDURE.**

Verify Time Slot Interchange (TSI) Port to Growth Service Circuit Unit (SCU) Assignment and TSI Port Submember Equipage Data of TSI Unit Type Translator

1. At the 1B Maintenance (MTC) terminal, enter **VER:UTYPE:TSI** *a***!**

   where *a* = Member number of connecting TSI

   Response: The information shown in Figure 1 is displayed.

VER:UTMN;OPT(),CUR: **FLN** *a* **UTYN TSI**

MEMN *b* **ME** *c*
ENTRY ADDRESS *d* **ENTRY SIZE** *e*

CUR
WORD 0 _____ _____ _____ _____
_____ _____ _____ _____
WORD 10 _____ _____ _____ _____
_____ _____ _____ _____
WORD 20 _____ _____ _____ _____
_____ _____ _____ _____
WORD 30 _____ _____ _____ _____
_____ _____ _____ _____
WORD 40 _____

a **= Floor location number**
b **= Member number of connecting TSI**
c **= Member equipage**
d **= 8-digit entry address**
e **= 2-digit entry size**

Figure 1. TSI Unit Type Translator

2. Is the message format and member identification correct as shown in Figure 1?

   If **Yes**, continue with Step 3.
   If **No**, determine the cause, resolve the problem, and repeat from Step 1.

3. Using TTY output and Figure 2, check that TSI port(s) associated with each growth Service Circuit Unit (SCU) have equipage bits set to 0.

   If these bits are **set to 0**, continue with Step 4.

   If these bits are **not set to 0**, use RC form 701 to degrow submember equipage to unequipped (See DLP-513 [OPER to SGRO], DLP-535 [SGRO to GROW], and/or DLP-536 [GROW to UNEQ], depending on current equipage).

   Caution: Depending on local procedures, supervisory or TELCO engineering approval must be obtained prior to performing any data change.

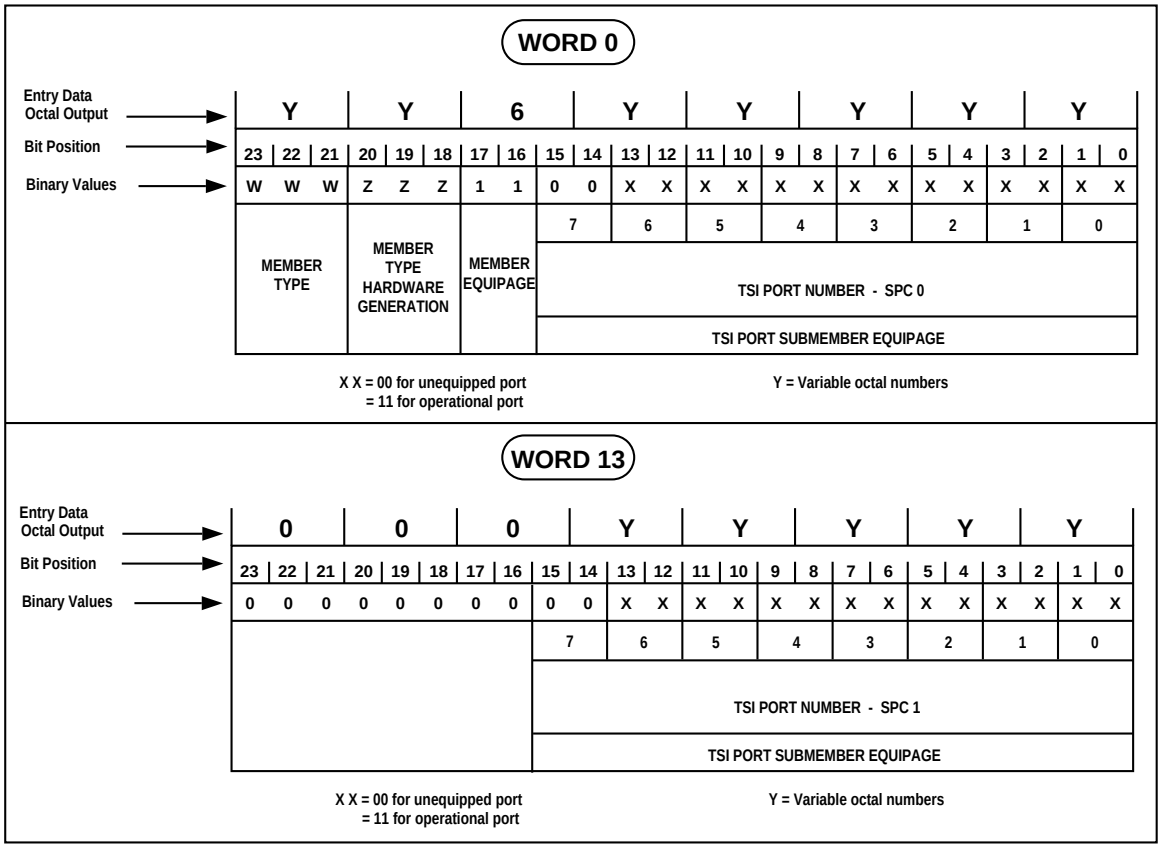

Figure 2. Word 0 and Word 13 Used to Determine TSI Equipage

4. Use the TTY output, office records, and Figure 3 to verify TSI port to growth SCU assignment per the appropriate word(s) listed in Table A. For each of these words, do the following:

    1. Convert the necessary octal digits in the word to binary digits and record.
    2. Convert the binary SCU number, SCS member number, and equipage type to decimal and record these values in the appropriate columns of Table A.
    3. Compare these numbers to the appropriate office records and record any discrepancies.

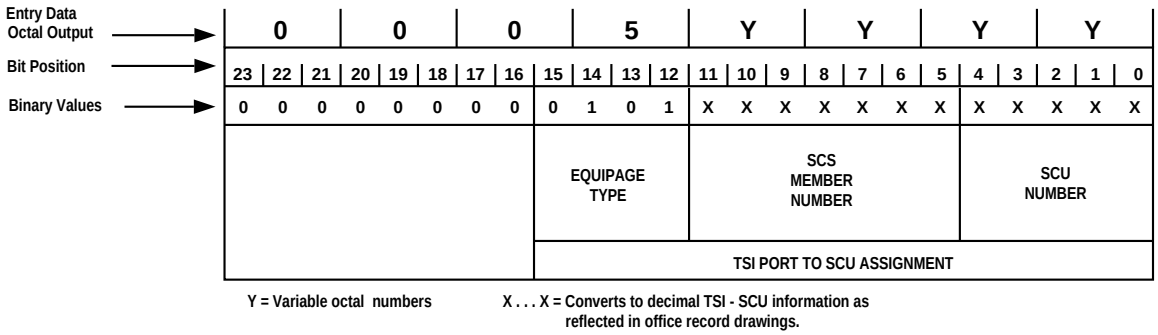

Figure 3. Format of Words Used to Verify TSI Port to SCU Assignment

TABLE A TSI Port to SCU Assignments

SPC AND TSI PORTS	OCTAL WORD	SCU NUMBER	SCS MEMBER NUMBER	EQUIPAGE TYPE
SPC 0 - Port 0	21			
SPC 0 - Port 1	22			
SPC 0 - Port 2	23			
SPC 0 - Port 3	24			
SPC 0 - Port 4	25			
SPC 0 - Port 5	26			
SPC 0 - Port 6	27			
SPC 1 - Port 0	31			
SPC 1 - Port 1	32			
SPC 1 - Port 2	33			
SPC 1 - Port 3	34			
SPC 1 - Port 4	35			
SPC 1 - Port 5	36			
SPC 1 - Port 6	37			

5. Were discrepancies found in Steps 3 and 4?

   If **Yes**, refer problem(s) to installer to determine error and decide on corrective action.

   If **No**, continue to Step 9.

6. Was the error found to be in the Unit Type entry data or the office records?

   If **office records**, continue to Step 9.

   If **Unit Type entry data**, continue to Step 7.

7. Assist the installer in taking appropriate corrective action as determined by regional engineering and as approved by office supervisor.

8. Have all Unit Type data errors now been corrected?

   If **Yes**, continue to Step 9.

   If **No**, return to Step 7.

9. **STOP! YOU HAVE COMPLETED THIS PROCEDURE.**

Change SCU 0, Disk Pair 0 Capacity and Equipage in the SCS Unit Type Translator

Caution: Calling up an RC form will cause all data on the screen to be cleared.

1. At the 1B Maintenance (MTC) terminal, enter **OP:RCFORM 703!**

   Response: Recent Change Form 703 appears on the screen.

2. At SCS, enter the appropriate Service Circuit System (SCS) Member Number (0-7).

3. At SCU, enter **0**.

4. At ORNU, enter a unique Order Number.

5. At DSKEQ, enter **P** (present) in location 0.

6. At DSKEQ, enter **F** (future) in location 2.

7. At DSKEQ, enter **F** in location 3.

8. At DSKC, enter **2** in location 0.

9. At DSKC, enter **0** in location 2.

10. At DSKC, enter **0** in location 3.

11. If no REMARKS are needed, return the cursor to the top of the form by pressing HOME.

12. Press SEND/ENTER

    Response: `RC ORNU a SUCCESSFULLY TESTED` followed by
    `RC ORNU a SUCCESSFULLY BUFFERED` followed by all new entries.

    where *a* = RC Order Number

    Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat Steps 1 through 12.

13. At the 1B MTC terminal, enter **RCACT:ORNU a!**

    where *a* = RC Order Number

    Response: `RC ORNU a ACTIVATED` followed by all new entries.

    where *a* = RC Order Number

    Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat this DLP, correcting the errors.

14. At the 1B MTC terminal, enter **VER:UTYPE:SCS x!**

    where *x* = Member Number (0-7)

    Caution: When populating* DSKEQ *and* DSKC *for a Type 2 (TN4000 - 4 Gb) disk pair at location 0 and/or 2, the adjacent locations 1 and/or 3 will also be populated when checking the unit type translator. This is done automatically via recent change.

    Response:
    ```
    VER:UTMN;OPT(),CUR:
    FLN a
    UTYN b
    MEMN c
    ME d
    ENTRY ADDRESS e
    ENTRY SIZE f
    ```

    The above responses are followed by a complete printout of the Service Circuit System (SCS) unit type entry data. Use this printout (word 26) and Figure 1 to determine if the SCU data (disk pair equipage and capacity) was properly entered.

    where *a* = Floor location number
    b = Unit type name
    c = Member number of growth associated complex
    d = Member equipage
    e = An 8-digit entry address
    f = A 2-digit entry size

15. **STOP! YOU HAVE COMPLETED THIS PROCEDURE.**

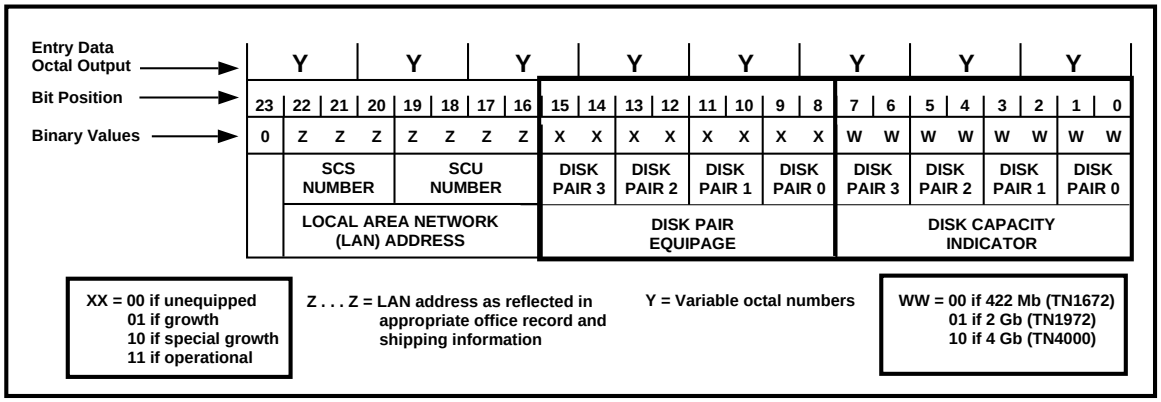

Figure 1. Word 26 in SCS Unit Type Translator

Ensure That K-Code Jumper Plugs for Both Controller 0 and Controller 1 are Properly Installed for the Growth Member Number

1. Ensure that K-code straps (jumper plugs) are installed as shown in Table A for Controllers 0 and 1.

TABLE A SCS K-Code Straps

SCC	BIT	FROM	TO	VALUE*							
				SCS 0	SCS 1	SCS 2	SCS 3	SCS 4	SCS 5	SCS 6	SCS 7
1	11	053-112-532	053-112-533	0	0	0	0	0	0	0	0
1	10	053-112-323	053-112-324	1	1	1	1	1	1	1	1
1	9	053-112-321	053-112-322	0	0	0	0	0	0	0	0
1	8	053-112-319	053-112-320	1	1	1	1	1	1	1	1
1	7	053-112-317	053-112-318	1	1	1	1	1	1	1	1
1	6	053-112-315	053-112-316	0	0	0	0	1	1	1	1
1	5	053-112-313	053-112-314	0	0	1	1	0	0	1	1
1	4	053-112-311	053-112-312	0	1	0	1	0	1	0	1
0	11	045-112-532	045-112-533	0	0	0	0	0	0	0	0
0	10	045-112-323	045-112-324	1	1	1	1	1	1	1	1
0	9	045-112-321	045-112-322	0	0	0	0	0	0	0	0
0	8	045-112-319	045-112-320	1	1	1	1	1	1	1	1
0	7	045-112-317	045-112-318	1	1	1	1	1	1	1	1
0	6	045-112-315	045-112-316	0	0	0	0	1	1	1	1
0	5	045-112-313	045-112-314	0	0	1	1	0	0	1	1
0	4	045-112-311	045-112-312	0	1	0	1	0	1	0	1

* In this column, a **0** indicates a **strap is used**, and a **1** indicates **no strap**.

2. **STOP! YOU HAVE COMPLETED THIS PROCEDURE.**

Degrow Disk Pair and MSP Equipage for an SCU From OPER to SGRO Using Recent Change (RC) Form 703

Caution: Calling up an RC form will cause all data on the screen to be cleared.

1. At the 1B Maintenance (MTC) terminal, enter **OP:RCFORM 703!**

   Response: Recent Change Form 703 appears on the screen.

2. At SCS, enter Service Circuit System (SCS) Member Number (0-7).

3. At SCU, enter the number of the Service Circuit Unit (SCU) (0-15).

4. At ORNU, enter a unique Order Number.

5. At MSBEQ, location 0, enter **S** (SGRO).

   Note: If the SCU has more than one associated Multifaceted Signal Processor circuit pack (TN1589), also enter **S** at locations 1 through 3 of MSBEQ, as required.

6. At DSKEQ, location 0, enter **S** (SGRO).

   Note: If SCU 0 is being degrown and has more than one associated disk pair, also enter **S** at locations 1 through 3 of DSKEQ, as required.

7. If no REMARKS are needed, return the cursor to the top of the form by pressing HOME.

8. Press SEND/ENTER

   Response: `RC ORNU` *a* `SUCCESSFULLY TESTED` followed by
   `RC ORNU` *a* `SUCCESSFULLY BUFFERED` followed by all new entries.

   where *a* = RC Order Number

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat Steps 1 through 8.

9. At the 1B MTC terminal, enter: **RCACT:ORNU** ***a*****!**
   where *a* = RC Order Number

   Response: `RC ORNU` *a* `ACTIVATED` followed by all new entries.

   where *a* = RC Order Number

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat this step correcting the errors.

10. At the 1B MTC terminal, enter: **VER:UTYPE:SCS** ***x*****!**

    where *x* = Member Number (0-7)

    Response:
    ```
    VER:UTMN;OPT(),CUR:
    FLN a
    UTYN b
    MEMN c
    ME d
    ENTRY ADDRESS e
    ENTRY SIZE f
    ```
    The above responses are followed by a complete printout of the Service Circuit System (SCS) unit type entry data. Use this printout and Figure 1 to determine if the SCU data (MSP and disk pair equipage) was properly entered.

    where *a* = Floor location number
    b = Unit type name
    c = Member number of growth associated complex
    d = Member equipage
    e = An 8-digit entry address
    f = A 2-digit entry size

11. **STOP! YOU HAVE COMPLETED THIS PROCEDURE.**

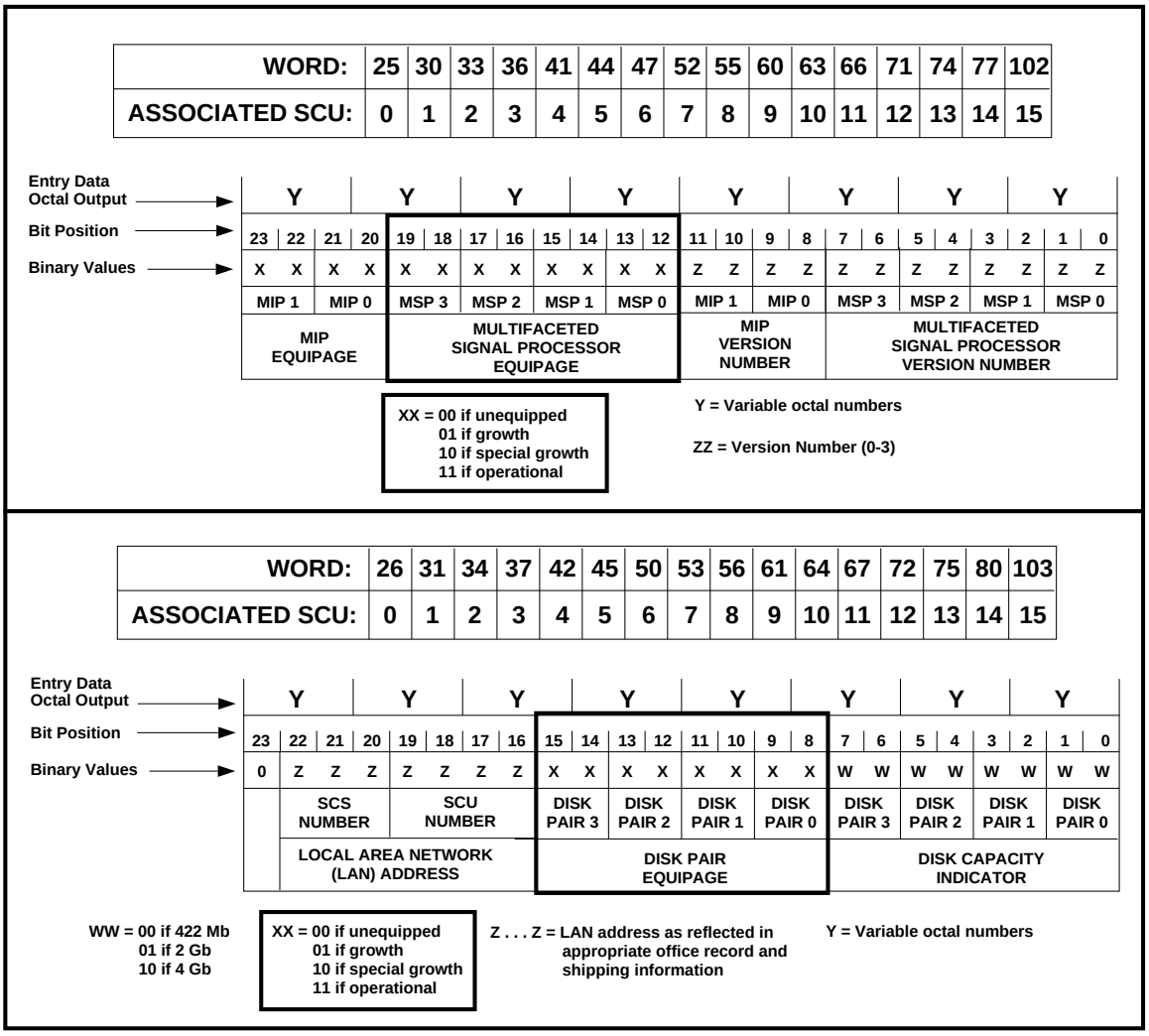

Figure 1. Words in SCS Unit Type Translator Used to Determine MSP and Disk Pair Equipage

Verify That Member Equipage, Submember Equipage, and Subunit Data Equipage are in the GROW State

Note: Steps 1 and 2 will be repeated for each applicable Service Circuit Unit (SCU). Begin with the lowest numbered SCU.

1. At the 1B MTC terminal, enter: **VER:UTYPE:SCS** *x*,**SME** *y*!

   where *x* = Member Number (0-7)
   y = SCU Index Number (See Table A)

TABLE A SCU Index Numbers

SCU	INDEX NO.	SCU	INDEX NO.	SCU	INDEX NO.	SCU	INDEX NO.
0	177	4	181	8	185	12	189
1	178	5	182	9	186	13	190
2	179	6	183	10	187	14	191
3	180	7	184	11	188	15	192

   Response: The following information is shown on the screen and printed:

   ```
   VER:UTMN;OPT(SME),CUR:          FLN a                UTYN b

   MEMN c          ME d

   SUBMEM e,       SME f
   ```

   where *a* = Floor location number
   b = Unit type name
   c = Member number of growth associated complex
   d = Member equipage
   e = SCU index number
   f = Submember equipage

2. Using the printout from Step 1, look at the `ME` and `SME` fields to verify that Member Equipage and Submember Equipage are both set to `GROW`.

3. Have Steps 1 and 2 been completed for all applicable SCUs?

   If **Yes**, continue to Step 4.

   If **No**, repeat Steps 1 and 2 for the next applicable SCU.

4. At the 1B MTC terminal, enter: **VER:UTYPE:SCS** *x***!**

   where *x* = Member Number (0-7)

   Response:
   ```
   VER:UTMN;OPT(),CUR:
   FLN a
   UTYN b
   MEMN c
   ME d
   ENTRY ADDRESS e
   ENTRY SIZE f
   ```

   The above responses are followed by a complete printout of the Service Circuit System (SCS) unit type entry data.

   where *a* = Floor location number
   b = Unit type name
   c = Member number of growth associated complex
   d = Member equipage
   e = An 8-digit entry address
   f = A 2-digit entry size

5. Use Figure 1 and the printout from Step 4 to verify that SCU subunit data equipage (MSP and disk pair equipage) is in the GROW state **for all applicable SCUs**.

6. **STOP! YOU HAVE COMPLETED THIS PROCEDURE.**

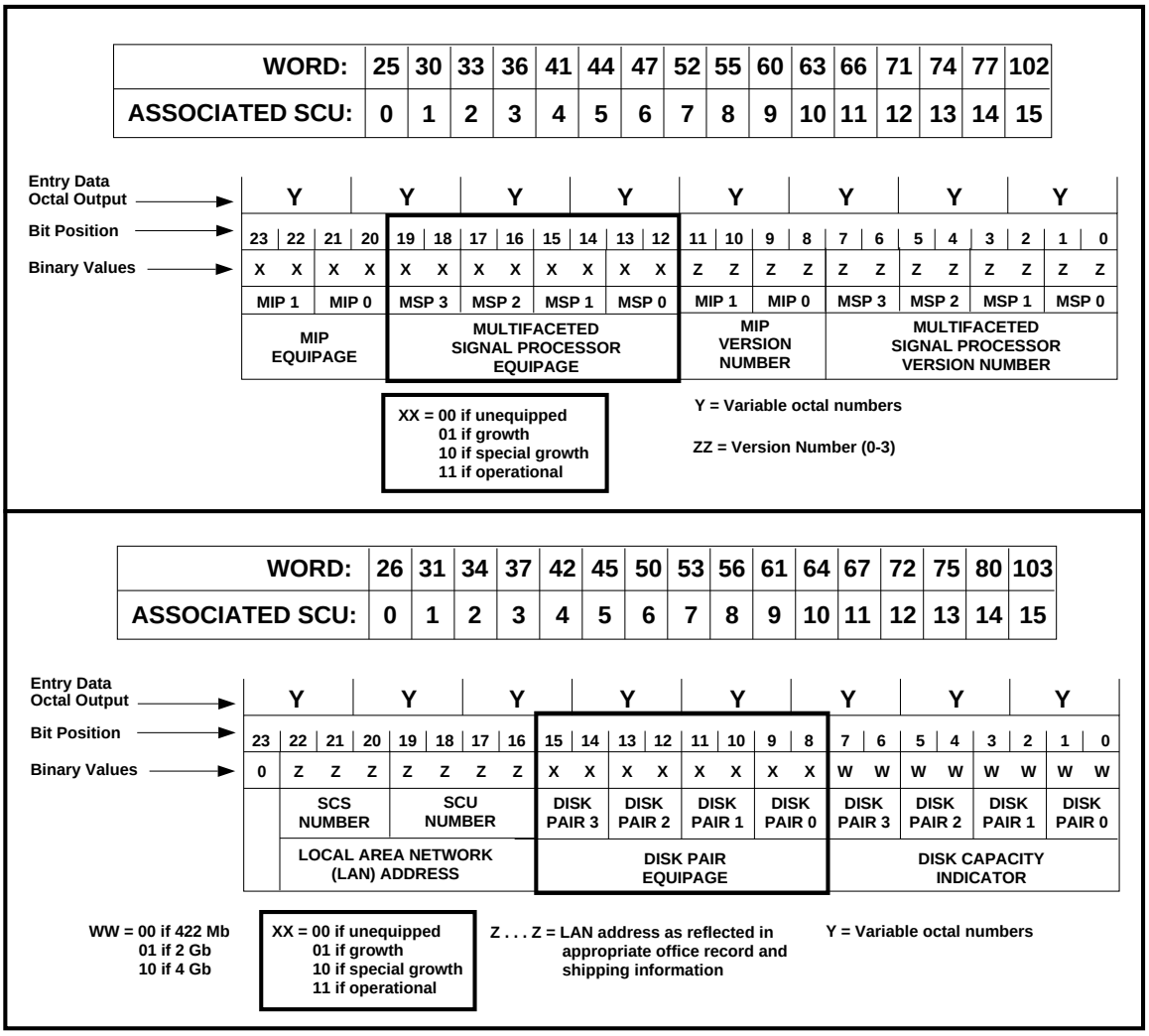

Figure 1. Words in SCS Unit Type Translator Used to Determine MSP and Disk Pair Equipage

Turn On ASM-Plus Feature Using Recent Change (RC) Form 809

Caution: Calling up an RC form will cause all data on the screen to be cleared.

1. At the Secondary Records (SREC) terminal, enter **OP:RCFORM 809!**

   Response: Recent Change Form 809 appears on the screen.

2. At `RC:FTR;CHG;OPT(BIT),` enter **TST**.

3. At `ORNU`, enter a unique Order Number.

4. At `FEATURE ITEM`, enter **ASM**.

5. At `ON OR OFF`, enter **ON**.

6. If no `REMARKS` are needed, return the cursor to the top of the form by pressing HOME.

7. Press SEND/ENTER

   Response: `RC ORNU` *a* `SUCCESSFULLY TESTED` followed by
   `RC ORNU` *a* `SUCCESSFULLY BUFFERED` followed by all new entries.

   where *a* = RC Order Number

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat Steps 1 through 7.

8. At the SREC terminal, enter **RCACT:ORNU** *a***!**

   where *a* = RC Order Number

   Response: `RC ORNU` *a* `ACTIVATED` followed by all new entries.

   where *a* = RC Order Number

9. At the SREC terminal, enter **OP:RCFORM 809!**

   Response: Recent Change Form 809 appears on the screen.

10. At `RC:FUNC;CHG;OPT(TRANS)`, enter **TST**.

11. At `ORNU`, enter a unique Order Number.

12. At `FEATURE ITEM`, enter **AASE**.

13. At `ON OR OFF`, enter **ON**.

    Note: This indicates that Announcement Administration System Equipment is provided.

14. If no `REMARKS` are needed, return the cursor to the top of the form by pressing HOME.

15. Press SEND/ENTER

    Response: `RC ORNU` *a* `SUCCESSFULLY TESTED` followed by
    `RC ORNU` *a* `SUCCESSFULLY BUFFERED` followed by all new entries.

    where *a* = RC Order Number

    Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat Steps 9 through 15.

16. At the SREC terminal, enter **RCACT:ORNU** ***a*****!**

    where *a* = RC Order Number

    Response: `RC ORNU` *a* `ACTIVATED` followed by all new entries.

    where *a* = RC Order Number

17. **STOP! YOU HAVE COMPLETED THIS PROCEDURE.**

Verify Unit Type Translator to Determine Time Slot Interchange (TSI) Information

1. At the 1B Maintenance (MTC) terminal, enter: **VER:UTYPE:SCS** *x***!**

   where *x* = Member Number (0-7)

   Response: The information shown in Figure 1 is displayed.

   Note: The words shown in Figure 1 are in **octal** format.

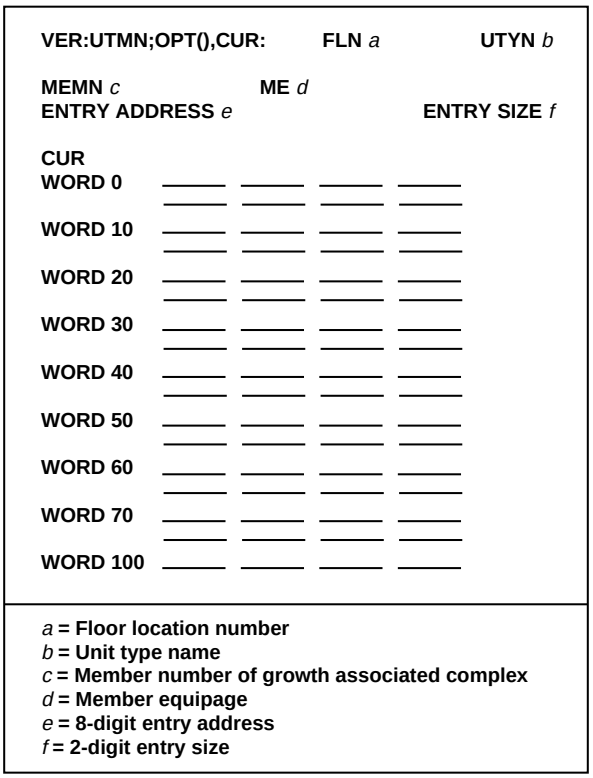

Figure 1. SCS Unit Type Translator

2. Is the message format and member identification correct as shown in Figure 1?

   If **Yes**, continue with Step 3.
   If **No**, determine and resolve the cause, and repeat from Step 1.

3. Using the TTY output and Figure 2, determine the values for each of the items listed in Table A for each applicable SCU. Record these values in the appropriate columns of Table A for future reference.

TABLE A SCU Information

SCU NO.	TSI MEMBER NUMBER	SPC NUMBER	LEVEL NO. (TSI PORT NUMBER)
0			
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			

4. **STOP! YOU HAVE COMPLETED THIS PROCEDURE.**

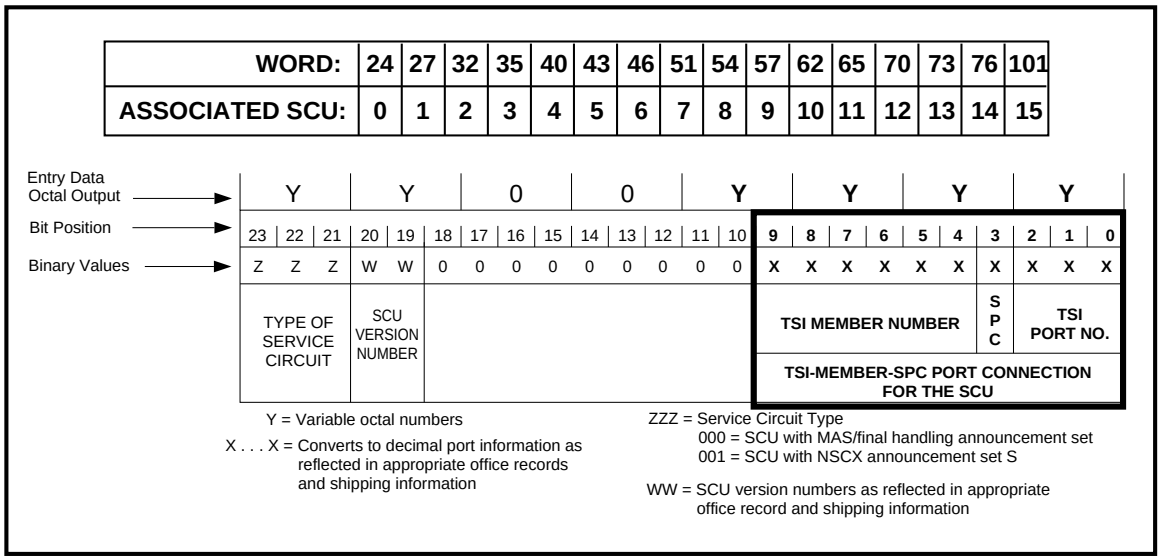

Figure 2. Words Used to Determine TSI Information

Update Version Numbers in the Growth Service Circuit System (SCS) Unit Type Translator

Caution: Calling up a Recent Change (RC) form will cause all data on the screen to be cleared.

1. At the 1B Maintenance (MTC) terminal, enter: **OP:RCFORM 801!**

   Response: Recent Change Form 801 appears on the screen.

2. At `RC:FUNC;CHG;OPT(TRANS)`, enter **FTA**.

3. At `TRANSID`, enter **UTSCS**.

4. At `ORNU`, enter a unique Order Number assigned to this word change.

5. At `ENTRY`, enter the SCS Member Number (0 through 7) of the growth SCS complex.

6. At `WORDNO`, enter **8**.

7. At `SIZE`, enter **6**.

8. At `DISP`, enter **0**.

9. At `BINOCT`, enter **O**.

10. At NEWDATA, enter the **new** 2-digit octal number for the updated version number as shown in Table A.

TABLE A Data to be Entered in NEWDATA Field

IF THE "VERSION NUMBER" COLUMN OF TABLE A IN DLP-545 SHOWS THIS VERSION NUMBER FOR FILE "SCCSFT"...	THEN ENTER THESE 2 DIGITS IN THE "NEWDATA" FIELD
0	00
1	11
2	22
3	33

11. At OLDDATA, enter the **existing** 2-digit octal number represented by bits 0 through 5 of octal word 10 in the SCS unit type translator. (See Figure 1.)

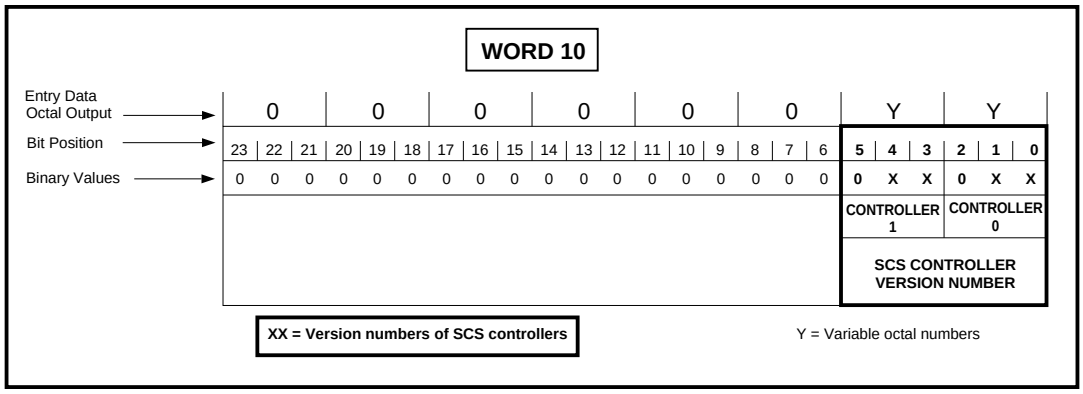

Figure 1. Word 10 in SCS Unit Type Translator Used to Determine Version Numbers of Controllers

12. If no REMARKS are needed, press HOME to return the cursor to the top of the form.

13. Press SEND/ENTER

Response: RC ORNU *a* ACTIVATED followed by all new entries.

where *a* = RC Order Number

Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat Steps 1 through 13 using the correct data.

14. At the 1B MTC terminal, enter **VER:UTYPE:SCS** *x***!**

    where *x* = Member Number (0-7)

    Response:
    ```
    VER:UTMN;OPT(),CUR:
    FLN a
    UTYN b
    MEMN c
    ME d
    ENTRY ADDRESS e
    ENTRY SIZE f
    ```

    where *a* = Floor location number
    b = Unit type name
    c = Member number of growth associated complex
    d = Member equipage
    e = An 8-digit entry address
    f = A 2-digit entry size

    The above responses are followed by a complete printout of the SCS unit type entry data. Use this printout and Figure 1 to determine if the SCC data (controller version number) was properly entered for both controllers. The version numbers for both controllers should be the same and should match the version number found in the "Version Number" column of Table A in DLP-545 for the file "SCCSFT."

    Note: Steps 15 through 24 will be repeated for each growth SCU.

15. At the 1B Maintenance (MTC) terminal, enter **OP:RCFORM 703!**

    Response: Recent Change Form 703 appears on the screen.

16. At SCS, enter the SCS Member Number (0-7) of the growth SCS complex.

17. At SCU, enter the appropriate SCU Number (0-15).

18. At ORNU, enter a unique Order Number.

19. At SCUFV, enter the new version number for the SCU (the version number that was recorded in the "Version Number" column of Table A in DLP-545 for the file "SCUOPR").

20. At MSBFV, locations 0-3, enter the new version number for the MSP (the version number that was recorded in the "Version Number" column of Table A in DLP-545 for the file "MSPFIX").

    Note: The "0" location for MSBFV will always be populated. Depending on your system configuration, no update may be needed for the remaining 3 locations.

21. If no REMARKS are needed, press HOME to return the cursor to the top of the form.

22. Press SEND/ ENTER

    Response: RC ORNU *a* SUCCESSFULLY TESTED followed by
    RC ORNU *a* SUCCESSFULLY BUFFERED followed by all new entries.

    where *a* = RC Order Number

    Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat Steps 15 through 22.

23. At the 1B MTC terminal, enter **RCACT:ORNU *a*!**

    where *a* = RC Order Number

    Response: RC ORNU *a* ACTIVATED followed by all new entries.

    where *a* = RC Order Number

    Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat this step correcting the errors.

24. At the 1B MTC terminal, enter **VER:UTYPE:SCS x!**

    where *x* = Member Number (0-7)

    Response:
    ```
    VER:UTMN;OPT(),CUR:
    FLN a
    UTYN b
    MEMN c
    ME d
    ENTRY ADDRESS e
    ENTRY SIZE f
    ```

    where *a* = Floor location number
    b = Unit type name
    c = Member number of growth associated complex
    d = Member equipage
    e = An 8-digit entry address
    f = A 2-digit entry size

    The above responses are followed by a complete printout of the SCS unit type entry data. Use this printout and Figure 2 to determine if the SCU data (SCU and MSP version numbers) was properly entered.

25. Have Steps 15 through 24 been completed for all growth SCUs?

    If **No**, repeat Steps 15 through 24 for the next SCU.

    If **Yes**, continue to Step 26.

26. **STOP! YOU HAVE COMPLETED THIS PROCEDURE.**

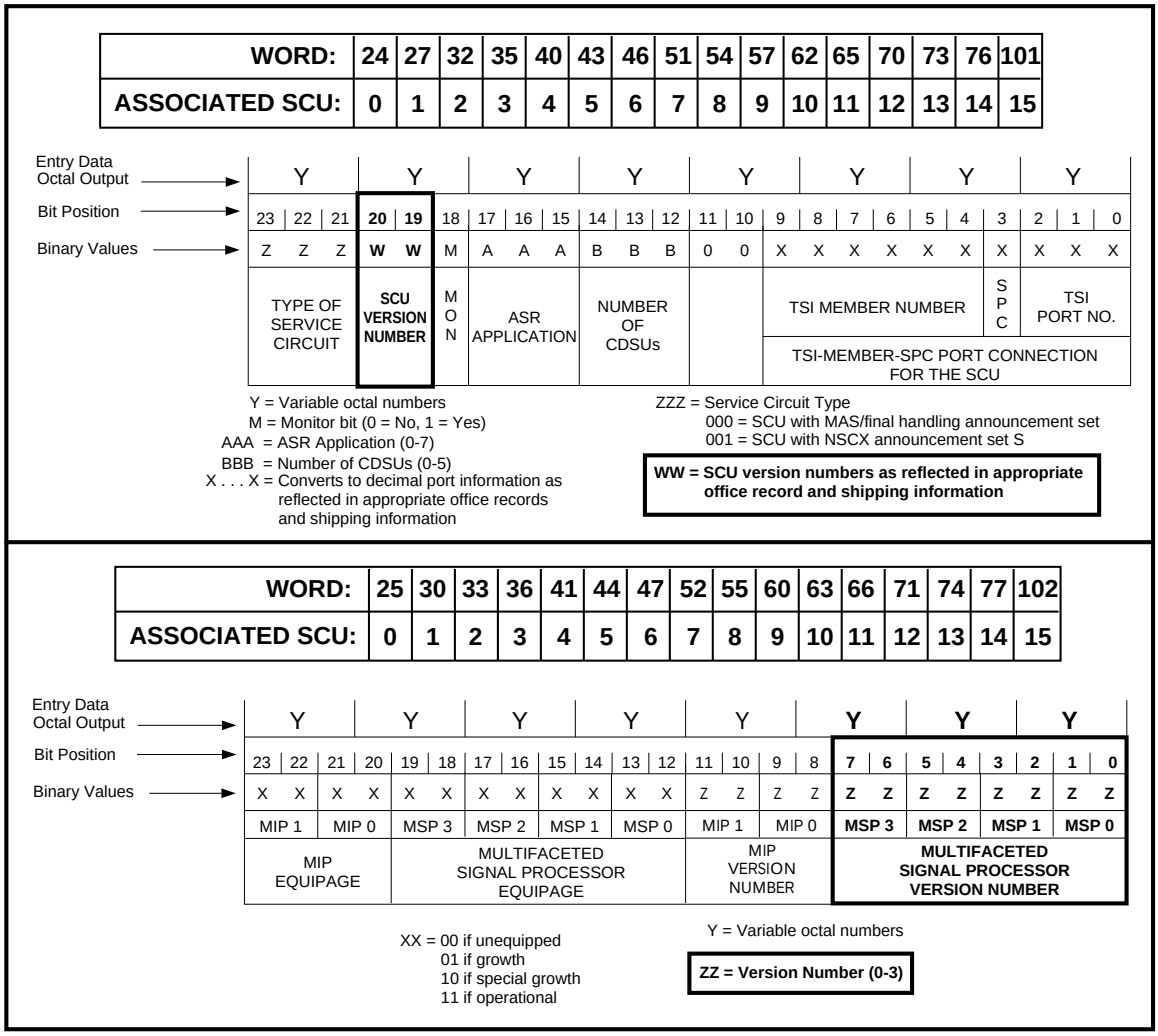

Figure 2. Words in SCS Unit Type Translator Used to Determine SCU and MSP Version Numbers

Copy the Correct and Up-to-Date SCS System Files From the APS to All Growth Disk Pair 0

At the 1B MTC terminal, enter the following input messages, one at a time, **being sure to wait for the successful completion of each message before continuing to the next**:

COPY:SCS *x***, SCCSFT,SVN 0,DVN** *y***; UCL!**
COPY:SCS *x***, SCUOPR,SVN 0,DVN** *y***; UCL!**
COPY:SCS *x***, SCUDGN,SVN 0,DVN** *y***; UCL!**
COPY:SCS *x***, MSPFIX,SVN 0,DVN** *y***; UCL!**
COPY:SCS *x***, MSPROV,SVN 0,DVN** *y***; UCL!**
COPY:SCS *x***, TONES,SVN 0,DVN** *y***; UCL!**

where *x* = Member Number (0-7)
y = Destination Version Number (0-3) (**Use the correct and up-to-date version number [Table A of DLP-545]**)

Note: Each of the above **COPY** commands could take up to 15 minutes to run. If any input message should fail, enter the message a second time before escalating the problem.

Response: `COPY:SCS` *x* `TASK COMPLETED` (for each of the above input messages).

Add the Disk Pair Capacity and Equipage for Disk Pair 2 in the SCS Unit Type Translator

Caution: Calling up an RC form will cause all data on the screen to be cleared.

1. At the 1B Maintenance (MTC) terminal, enter **OP:RCFORM 703!**

   Response: Recent Change Form 703 appears on the screen.

2. At SCS, enter the appropriate SCS Member Number (0-7).

3. At SCU, enter **0**.

4. At ORNU, enter a unique Order Number.

5. At DSKEQ, enter **P** (present) in location 2.

6. At DSKC, enter **2** in location 2.

7. If no REMARKS are needed, return the cursor to the top of the form by pressing HOME.

8. Press SEND/ENTER

   Response: RC ORNU a SUCCESSFULLY TESTED followed by
   RC ORNU a SUCCESSFULLY BUFFERED followed by all new entries.

   where *a* = RC Order Number

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat Steps 1 through 8.

9. At the 1B MTC terminal, enter **RCACT:ORNU a!**

   where *a* = RC Order Number

   Response: `RC ORNU a ACTIVATED` followed by all new entries.

   where *a* = RC Order Number

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat this DLP, correcting the errors.

10. At the 1B MTC terminal, enter **VER:UTYPE:SCS x!**

    where *x* = Member Number (0-7)

    Caution: When populating* DSKEQ *and* DSKC *for a Type 2 (TN4000 - 4 Gb) disk pair at location 0 and/or 2, the adjacent locations 1 and/or 3 will also be populated when checking the unit type translator. This is done automatically via recent change.

    Response:
    ```
    VER:UTMN;OPT(),CUR:
    FLN a
    UTYN b
    MEMN c
    ME d
    ENTRY ADDRESS e
    ENTRY SIZE f
    ```

    The above responses are followed by a complete printout of the Service Circuit System (SCS) unit type entry data. Use this printout (word 26) and Figure 1 to determine if the SCU data (disk pair equipage and capacity) was properly entered.

    where *a* = Floor location number
    b = Unit type name
    c = Member number of growth associated complex
    d = Member equipage
    e = An 8-digit entry address
    f = A 2-digit entry size

11. **STOP! YOU HAVE COMPLETED THIS PROCEDURE.**

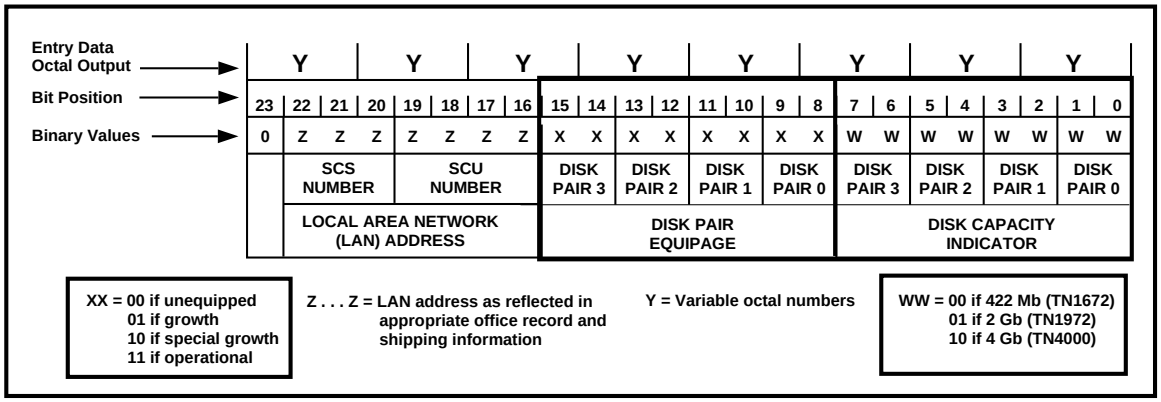

Figure 1. Word 26 in SCS Unit Type Translator

Verify the Destination Version Number (DVN) for All Service Circuit System (SCS) System File Types to be Updated

1. At the 1B Maintenance (MTC) terminal, enter **VER:UTYPE:SCS x!**

   where *x* = Member Number (0-7)

   Response: The information shown in Figure 1 is displayed and printed. This printout will be used to determine the existing version number for each of the seven SCS system files.

   Note: The words shown in Figure 1 are in **octal** format.

VER:UTMN;OPT(),CUR: **FLN** *a* **UTYN** *b*

MEMN *c* **ME** *d*
ENTRY ADDRESS *e* **ENTRY SIZE** *f*

CUR				
WORD 0	_____ _____	_____ _____	_____ _____	_____ _____
WORD 10	_____ _____	_____ _____	_____ _____	_____ _____
WORD 20	_____ _____	_____ _____	_____ _____	_____ _____
WORD 30	_____ _____	_____ _____	_____ _____	_____ _____
WORD 40	_____ _____	_____ _____	_____ _____	_____ _____
WORD 50	_____ _____	_____ _____	_____ _____	_____ _____
WORD 60	_____ _____	_____ _____	_____ _____	_____ _____
WORD 70	_____ _____	_____ _____	_____ _____	_____ _____
WORD 100	_____	_____	_____	_____

a **= Floor location number**
b **= Unit type name**
c **= Member number of growth associated complex**
d **= Member equipage**
e **= 8-digit entry address**
f **= 2-digit entry size**

Figure 1. SCS Unit Type Translator

2. Using the printout from Step 1 and Figure 2 (page 3), determine the existing version number for Controllers 0 and 1 by looking at bits 0 through 5 in octal word 10. The existing version number should be the same for both controllers and can range from 0 to 3.

   The DVN is the existing version number plus 1. (If the version number is 3, the DVN is 0.) Record the DVN in Table A as the "DVN" for SCS system file type **SCCSFT**.

   Note: The DVN for the **TONES** file type **is always 0** and is already entered in Table A.

TABLE A DVNs for SCS System Files to be Updated

SCS System File Type	DVN
SCCSFT	
SCUOPR	
SCUDGN	
MSPFIX	
MSPROV	
TONES	0

3. Using the printout from Step 1 and the middle section of Figure 2 (page 3), determine the version number for **existing** SCUs by looking at bits 19 and 20 of the applicable words.

   The DVN is the existing version number plus 1. (If the version number is 3, the DVN is 0.) Record the DVN in Table A as the "DVN" for SCS system file types **SCUOPR and SCUDGN**. (The version number should be the same for all existing SCUs and can range from 0 to 3.)

4. Using the printout from Step 1 and the bottom section of Figure 2 (page 3), determine the version number for Multifaceted Signal Processor (MSP) 0 per bits 0 and 1 of the applicable words.

   The DVN is the existing version number plus 1. (If the version number is 3, the DVN is 0.) Record the DVN in Table A as the "DVN" for SCS system file types **MSPFIX and MSPPROV**. (The MSP version number should be the same for all existing SCUs and can range from 0 to 3.)

5. **STOP! YOU HAVE COMPLETED THIS PROCEDURE.**

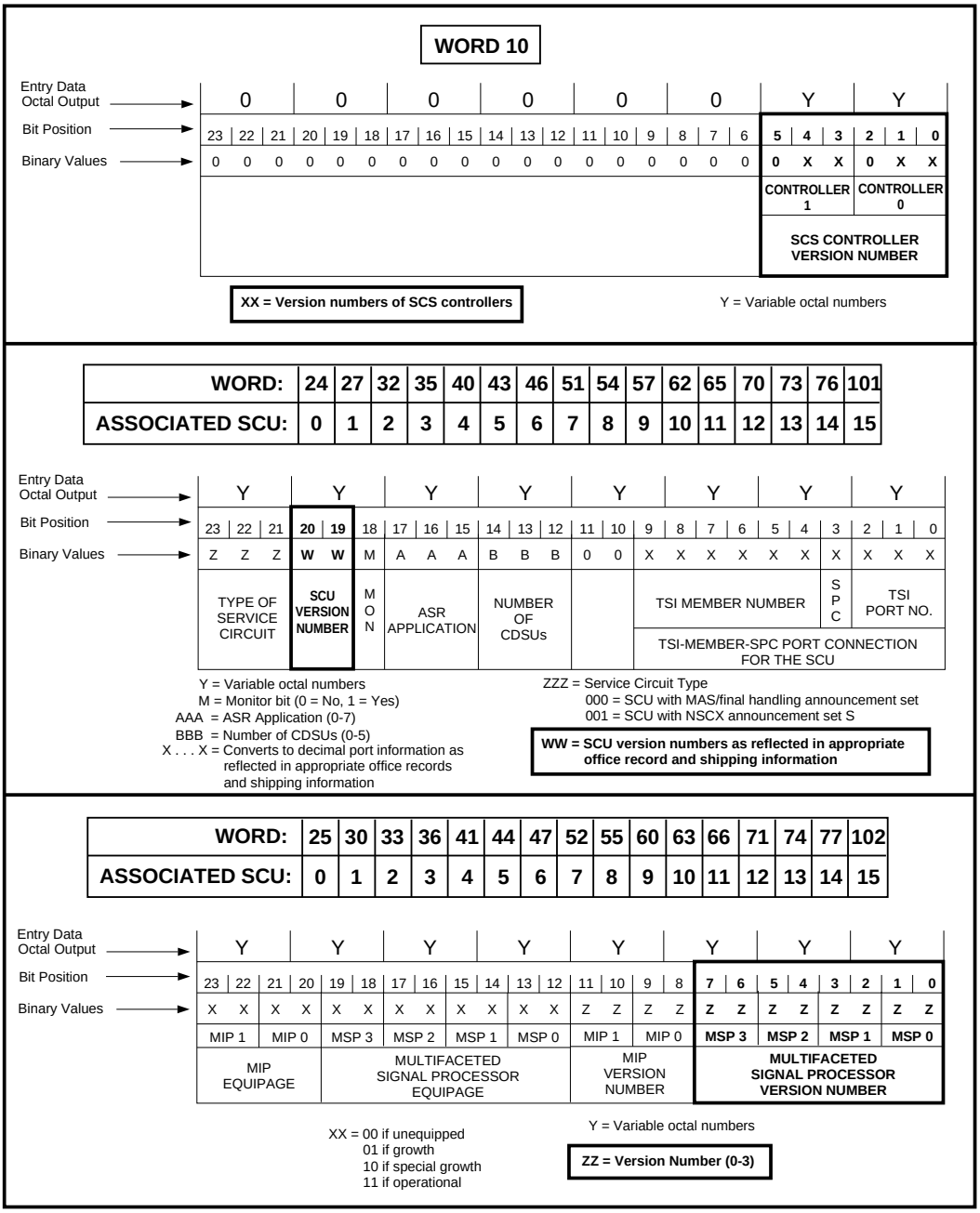

Figure 2. Words in SCS Unit Type Translator Used to Determine Version Numbers

Update the Version Number in the Service Circuit System (SCS) Translator for Both Controllers Using Recent Change (RC) Form 801

Caution: Calling up a Recent Change (RC) form will cause all data on the screen to be cleared.

1. At the 1B Maintenance (MTC) terminal, enter **OP:RCFORM 801!**

   Response: Recent Change Form 801 appears on the screen.

2. At `RC:FUNC;CHG;OPT(TRANS)`, enter **FTA**.

3. At `TRANSID`, enter **UTSCS**.

4. At `ORNU`, enter a unique Order Number assigned to this word change.

5. At `ENTRY`, enter the SCS Member Number (0 through 7).

6. At `WORDNO`, enter **8**.

7. At `SIZE`, enter **6**.

8. At `DISP`, enter **0**.

9. At `BINOCT`, enter **O**.

10. At NEWDATA, enter the **new** 2-digit octal number for the updated version number as shown in Table A.

TABLE A Data to be Entered in NEWDATA Field

IF THE DVN COLUMN OF TABLE A IN DLP-526 SHOWS THIS VERSION NUMBER FOR FILE "SCCFST"...	ENTER THESE 2 DIGITS IN THE "NEWDATA" FIELD
0	00
1	11
2	22
3	33

11. At OLDDATA, enter the **existing** 2-digit octal number represented by bits 0 through 5 of octal word 10 in the SCS unit type translator. (See Figure 1.)

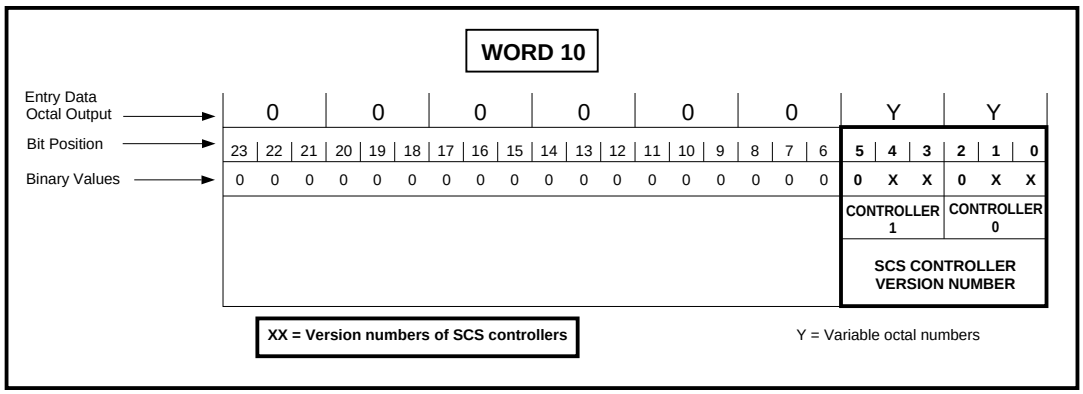

Figure 1. Word 10 in SCS Unit Type Translator Used to Determine Version Numbers of Controllers

12. If no REMARKS are needed, return the cursor to the top of the form by pressing HOME.

13. Press SEND/ ENTER

Response: RC ORNU a ACTIVATED followed by all new entries.

where *a* = RC Order Number

Note: All entries should be checked for accuracy. If any entries are found to be incorrect, remove recent change using RC form 700 and repeat Steps 1 through 13.

14. At the 1B MTC terminal, enter **VER:UTYPE:SCS x!**

    where *x* = Member Number (0-7)

    Response:
    ```
    VER:UTMN;OPT(),CUR:
    FLN a
    UTYN b
    MEMN c
    ME d
    ENTRY ADDRESS e
    ENTRY SIZE f
    ```

    where *a* = Floor location number
    b = Unit type name
    c = Member number of growth associated complex
    d = Member equipage
    e = An 8-digit entry address
    f = A 2-digit entry size

    The above responses are followed by a complete printout of the SCS unit type entry data. Use this printout and Figure 1 to determine if the SCC data (controller version number) was properly entered for both controllers. The version numbers for both controllers should be the same and should match the version number found in the "DVN" column of Table A in DLP-526 for the file "SCCSFT."

15. **STOP! YOU HAVE COMPLETED THIS PROCEDURE.**

Update the Version Number of the SCU and Associated Multifaceted Signal Processor (MSP) Using RC Form 703

Caution: Calling up an RC form will cause all data on the screen to be cleared.

1. At the 1B Maintenance (MTC) terminal, enter **OP:RCFORM 703!**

   Response: Recent Change Form 703 appears on the screen.

2. At SCS, enter the SCS Member Number (0-7).

3. At SCU, enter the SCU Number (0-15).

4. At ORNU, enter a unique Order Number.

5. At SCUFV, enter the new version number for the SCU (the version number that was recorded in the DVN column of Table A, in DLP-526, for the file "SCUOPR").

6. At MSBFV, locations 0-5, enter the new version number for the MSP (the version number that was recorded in the DVN column of Table A, in DLP-526, for the file "MSPFIX").

   Note: The "0" location for MSBFV will always be populated. Depending on your system configuration, no update may be needed for the remaining five locations.

7. If no REMARKS are needed, return the cursor to the top of the form by pressing HOME.

8. Press SEND/ ENTER

   Response: RC ORNU a SUCCESSFULLY TESTED followed by
   RC ORNU a SUCCESSFULLY BUFFERED followed by all new entries.

   where *a* = RC Order Number

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat Steps 1 through 8.

9. At the 1B MTC terminal, enter **RCACT:ORNU a!**

   where *a* = RC Order Number

   Response: `RC ORNU a ACTIVATED` followed by all new entries.

   where *a* = RC Order Number

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat this step correcting the errors.

10. At the 1B MTC terminal, enter **VER:UTYPE:SCS x!**

    where *x* = Member Number (0-7)

    Response:
    ```
    VER:UTMN;OPT(),CUR:
    FLN a
    UTYN b
    MEMN c
    ME d
    ENTRY ADDRESS e
    ENTRY SIZE f
    ```

    where *a* = Floor location number
    b = Unit type name
    c = Member number of growth associated complex
    d = Member equipage
    e = An 8-digit entry address
    f = A 2-digit entry size

    The above responses are followed by a complete printout of the SCS unit type entry data. Use this printout and Figure 1 to determine if the SCU data (SCU and MSP version numbers) was properly entered.

11. **STOP! YOU HAVE COMPLETED THIS PROCEDURE.**

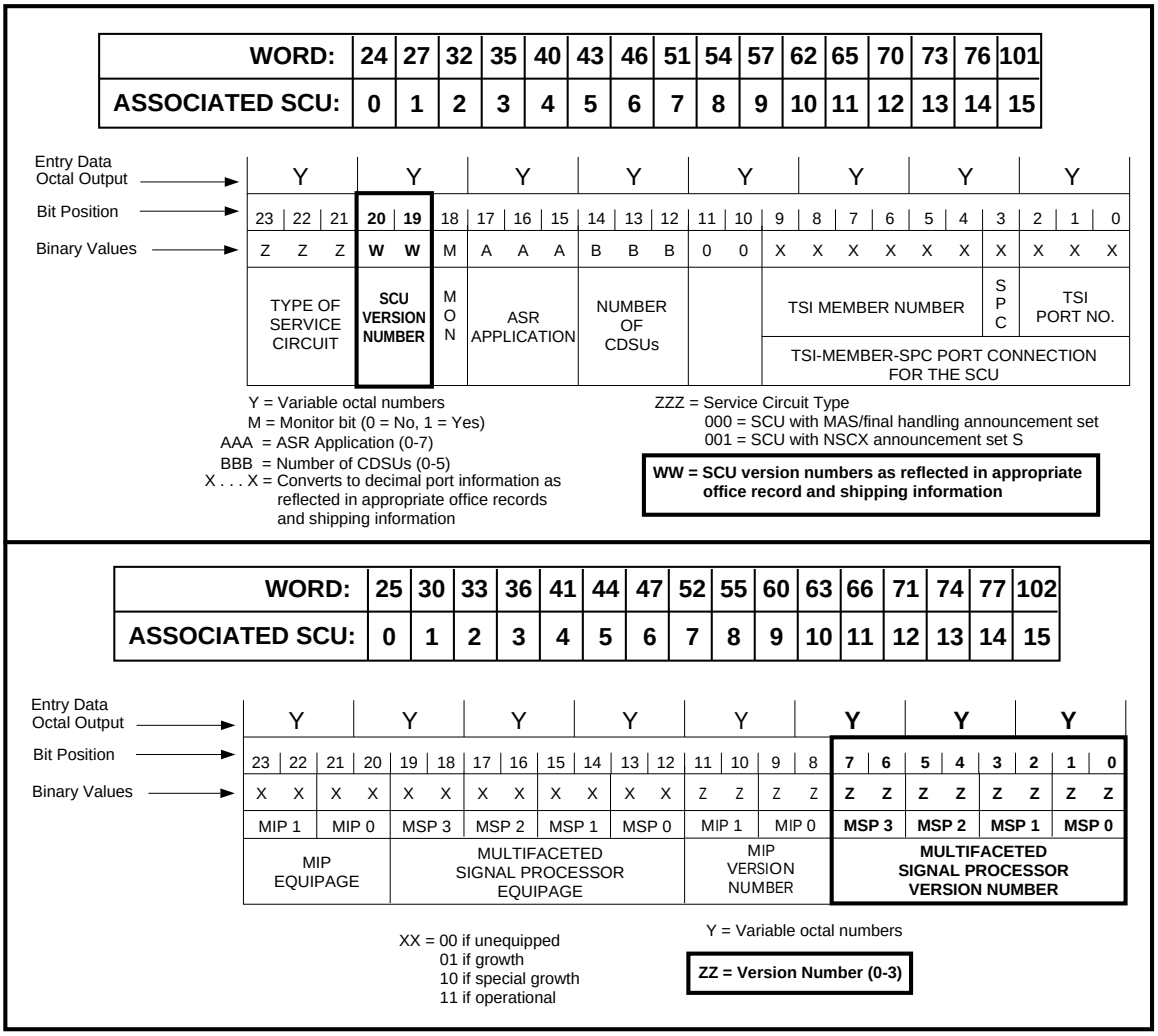

Figure 1. Words in SCS Unit Type Translator Used to Verify SCU and MSP Version Numbers

Degrow Time Slot Interchange (TSI) Submember Equipage From OPER to SGRO Using Recent Change (RC) Form 701

Caution: Calling up an RC form will cause all data on the screen to be cleared.

1. At the 1B Maintenance (MTC) terminal, enter **OP:RCFORM 701!**

   Response: Recent Change Form 701 appears on the screen.

2. At UTYN, enter **TSI**.

3. At ORNU, enter a unique Order Number.

4. At MEMN, enter the Member Number.

5. At SUBMEM, enter the Submember Name (**T0PRTEQ[0-6]** for SPC0 ports 0-6, or **T1PRTEQ[0-6]** for SPC1 ports 0-6).

6. At SME, enter **OPER**, then enter **SGRO**.

7. If no REMARKS are needed, return the cursor to the top of the form by pressing HOME.

8. Press SEND/ENTER

   Response: RC ORNU *a* SUCCESSFULLY TESTED followed by
   RC ORNU *a* SUCCESSFULLY BUFFERED followed by all new entries.

   where *a* = RC Order Number

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat Steps 1 through 8.

9. At the 1B MTC terminal, enter **RCACT:ORNU a!**

   where *a* = RC Order Number

   Response: `RC ORNU a ACTIVATED` followed by all new entries.

   where *a* = RC Order Number

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, remove recent change using RC form 701 and repeat this DLP.

10. At the 1B MTC terminal, enter **VER:UTYPE:TSI x,SME y!**

    where *x* = Member Number (0-62)
    y = TSI Port Index Number (See Table A)

TABLE A TSI Port Index Numbers

PORT	INDEX NO.	PORT	INDEX NO.	PORT	INDEX NO.
SPC 0-0	56	SPC 0-5	61	SPC 1-3	66
SPC 0-1	57	SPC 0-6	62	SPC 1-4	67
SPC 0-2	58	SPC 1-0	63	SPC 1-5	68
SPC 0-3	59	SPC 1-1	64	SPC 1-6	69
SPC 0-4	60	SPC 1-2	65		

Response:
```
VER:UTMN;OPT(SME),CUR:
FLN a
UTYN b
MEMN c
ME d
SME e
SUBMEM f
```

where *a* = Floor location number
b = Unit type name
c = Member number of growth associated complex
d = Member equipage
e = SubMember Equipage (SME)
f = SME index number

Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat this step using correct data.

11. **STOP! YOU HAVE COMPLETED THIS PROCEDURE.**

Degrow Disk Pair and MSP Equipage for an SCU From SGRO to GROW Using Recent Change (RC) Form 703

Caution: Calling up an RC form will cause all data on the screen to be cleared.

1. At the 1B Maintenance (MTC) terminal, enter **OP:RCFORM 703!**

   Response: Recent Change Form 703 appears on the screen.

2. At SCS, enter the SCS Member Number (0-7).

3. At SCU, enter the number of the SCU (0-15).

4. At ORNU, enter a unique Order Number.

5. At MSBEQ, location 0, enter **G** (grow).

   Note: If the SCU has more than one associated Multifaceted Signal Processor circuit pack (TN1589), also enter **G** at locations 1 through 3 of MSBEQ, as required.

6. At DSKEQ, location 0, enter **G** (grow).

   Note: If SCU 0 is being degrown and has more than one associated disk pair, also enter **G** at locations 1 through 3 of DSKEQ, as required.

7. If no REMARKS are needed, return the cursor to the top of the form by pressing HOME.

8. Press SEND/ENTER

   Response: `RC ORNU` *a* `SUCCESSFULLY TESTED` followed by
   `RC ORNU` *a* `SUCCESSFULLY BUFFERED` followed by all new entries.

   where *a* = RC Order Number

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat Steps 1 through 8.

9. At the 1B MTC terminal, enter **RCACT:ORNU** *a***!**

   where *a* = RC Order Number

   Response: `RC ORNU` *a* `ACTIVATED` followed by all new entries.

   where *a* = RC Order Number

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat this step correcting the errors.

10. At the 1B MTC terminal, enter **VER:UTYPE:SCS** *x***!**

    where *x* = Member Number (0-7)

    Response:
    ```
    VER:UTMN;OPT(),CUR:
    FLN a
    UTYN b
    MEMN c
    ME d
    ENTRY ADDRESS e
    ENTRY SIZE f
    ```

    The above responses are followed by a complete printout of the Service Circuit System (SCS) unit type entry data. Use this printout and Figure 1 to determine if the SCU data (MSP and disk pair equipage) was properly entered.

    where *a* = Floor location number
    b = Unit type name
    c = Member number of growth associated complex
    d = Member equipage
    e = An 8-digit entry address
    f = A 2-digit entry size

11. **STOP! YOU HAVE COMPLETED THIS PROCEDURE.**

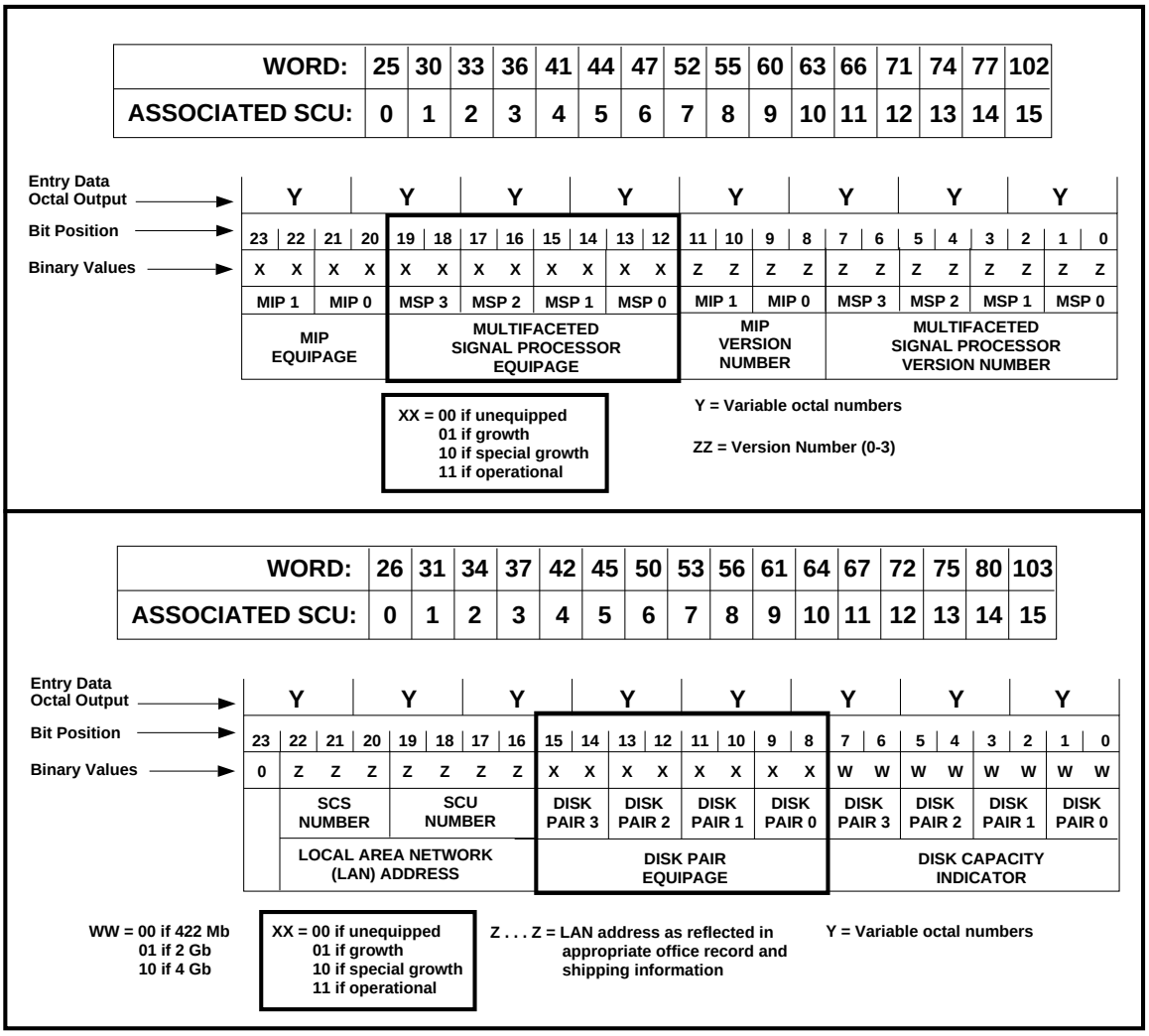

Figure 1. Words in SCS Unit Type Translator Used to Determine MSP and Disk Pair Equipage

Degrow Disk Pair and MSP Equipage for an SCU From GROW to UNEQ Using Recent Change (RC) Form 703

Caution: Calling up an RC form will cause all data on the screen to be cleared.

1. At the 1B Maintenance (MTC) terminal, enter **OP:RCFORM 703!**

   Response: Recent Change Form 703 appears on the screen.

2. At SCS, enter the SCS Member Number (0-7).

3. At SCU, enter the number of the SCU.

4. At ORNU, enter a unique Order Number.

5. At MON, enter **N**.

6. At MSBEQ, location 0, enter **F** (Future).

   Note: If the SCU has more than one associated Multifaceted Signal Processor circuit pack (TN1589), also enter **F** at locations 1 through 3 of MSBEQ, as required.

7. At DSKEQ, location 0, enter **F** (Future).

   Note: If SCU 0 is being degrown and has more than one associated disk pair, also enter **F** at locations 1 through 3 of DSKEQ, as required.

8. If no REMARKS are needed, return the cursor to the top of the form by pressing HOME.

9. Press SEND/ENTER

   Response: `RC ORNU a SUCCESSFULLY TESTED` followed by
   `RC ORNU a SUCCESSFULLY BUFFERED` followed by all new entries.

   where *a* = RC Order Number

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat Steps 1 through 9.

10. At the 1B MTC terminal, enter **RCACT:ORNU a!**

    where *a* = RC Order Number

    Response: `RC ORNU a ACTIVATED` followed by all new entries.

    where *a* = RC Order Number

    Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat this step correcting the errors.

11. At the 1B MTC terminal, enter **VER:UTYPE:SCS x!**

    where *x* = Member Number (0-7)

    Response:
    ```
    VER:UTMN;OPT(),CUR:
    FLN a
    UTYN b
    MEMN c
    ME d
    ENTRY ADDRESS e
    ENTRY SIZE f
    ```

    The above responses are followed by a complete printout of the Service Circuit System (SCS) unit type entry data. Use this printout and Figure 1 to determine if the SCU data (MSP and disk pair equipage) was properly entered.

    where *a* = Floor location number
    b = Unit type name
    c = Member number of growth associated complex
    d = Member equipage
    e = An 8-digit entry address
    f = A 2-digit entry size

12. **STOP! YOU HAVE COMPLETED THIS PROCEDURE.**

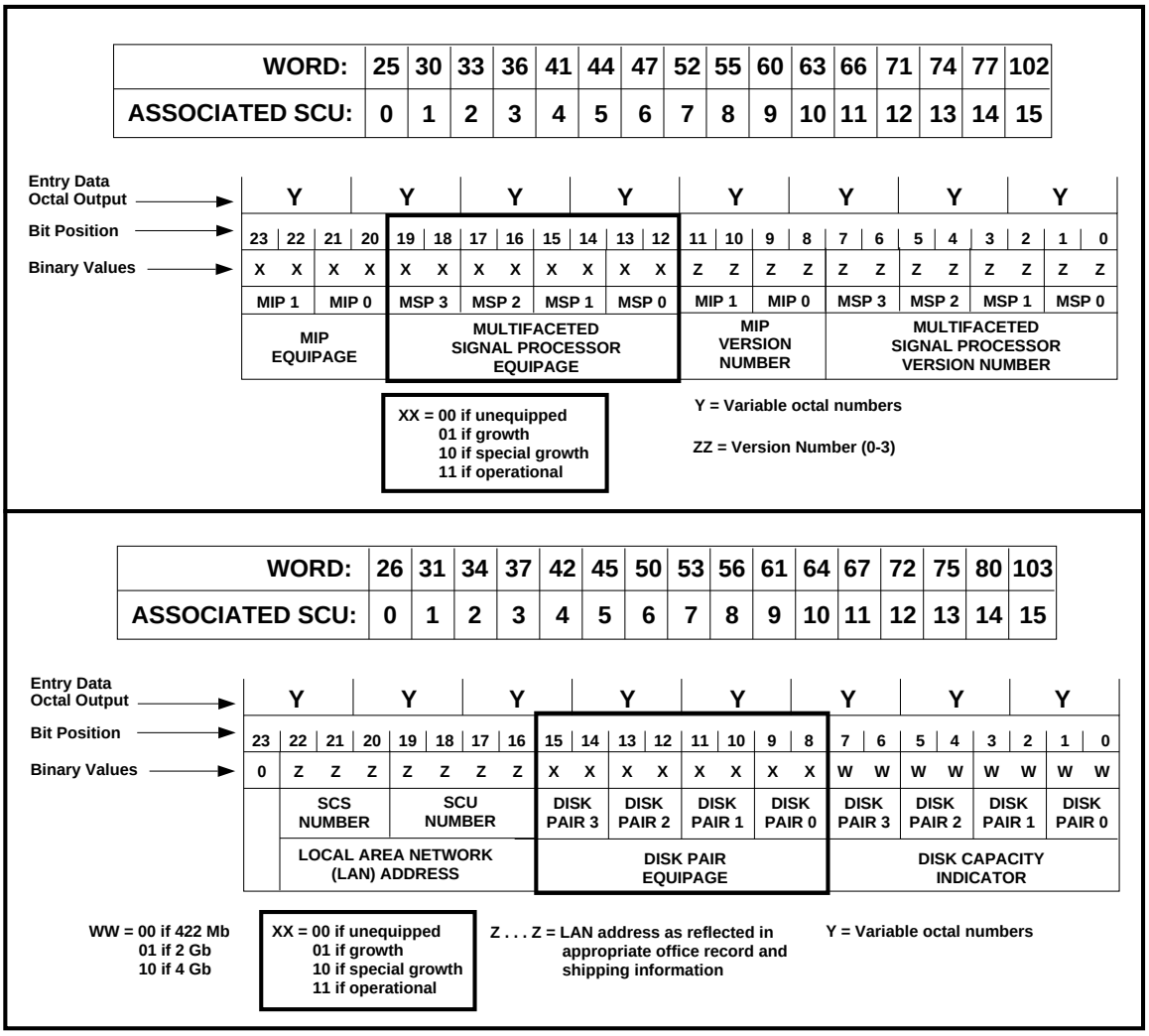

Figure 1. Words in SCS Unit Type Translator Used to Determine MSP and Disk Pair Equipage

Degrow Time Slot Interchange (TSI) Submember Equipage From SGRO to GROW Using Recent Change (RC) Form 701

Caution: Calling up an RC form will cause all data on the screen to be cleared.

1. At the 1B Maintenance (MTC) terminal, enter **OP:RCFORM 701!**

   Response: Recent Change Form 701 appears on the screen.

2. At UTYN, enter **TSI**.

3. At ORNU, enter a unique Order Number.

4. At MEMN, enter the Member Number.

5. At SUBMEM, enter the Submember Name (**T0PRTEQ[0-6]** for SPC0 ports 0-6, or **T1PRTEQ[0-6]** for SPC1 ports 0-6).

6. At SME, enter **SGRO**, then enter **GROW**.

7. If no REMARKS are needed, return the cursor to the top of the form by pressing HOME.

8. Press SEND/ENTER

   Response: RC ORNU *a* SUCCESSFULLY TESTED followed by
   RC ORNU *a* SUCCESSFULLY BUFFERED followed by all new entries.

   where *a* = RC Order Number

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat Steps 1 through 8.

9. At the 1B MTC terminal, enter **RCACT:ORNU a!**

   where *a* = RC Order Number

   Response: `RC ORNU a ACTIVATED` followed by all new entries.

   where *a* = RC Order Number

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, remove recent change using RC form 701 and repeat this DLP.

10. At the 1B MTC terminal, enter **VER:UTYPE:TSI x,SME y!**

    where *x* = Member Number (0-62)
    y = TSI Port Index Number (see Table A)

TABLE A TSI Port Index Numbers

PORT	INDEX NO.	PORT	INDEX NO.	PORT	INDEX NO.
SPC 0-0	56	SPC 0-5	61	SPC 1-3	66
SPC 0-1	57	SPC 0-6	62	SPC 1-4	67
SPC 0-2	58	SPC 1-0	63	SPC 1-5	68
SPC 0-3	59	SPC 1-1	64	SPC 1-6	69
SPC 0-4	60	SPC 1-2	65		

Response:
```
VER:UTMN;OPT(SME),CUR:
FLN a
UTYN b
MEMN c
ME d
SME e
SUBMEM f
```

where *a* = Floor location number
b = Unit type name
c = Member number of growth associated complex
d = Member equipage
e = SubMember Equipage (SME)
f = SME index number

Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat this step using correct data.

11. **STOP! YOU HAVE COMPLETED THIS PROCEDURE.**

Degrow Time Slot Interchange (TSI) Submember Equipage From GROW to UNEQ Using Recent Change (RC) Form 701

Caution: Calling up an RC form will cause all data on the screen to be cleared.

1. At the 1B Maintenance (MTC) terminal, enter **OP:RCFORM 701!**

   Response: Recent Change Form 701 appears on the screen.

2. At UTYN, enter **TSI**.

3. At ORNU, enter a unique Order Number.

4. At MEMN, enter the Member Number.

5. At SUBMEM, enter the Submember Name (**T0PRTEQ[0-6]** for SPC0 ports 0-6, or **T1PRTEQ[0-6]** for SPC1 ports 0-6).

6. At SME, enter **GROW**, then enter **UNEQ**.

7. If no REMARKS are needed, return the cursor to the top of the form by pressing HOME.

8. Press SEND/ENTER

   Response: RC ORNU *a* SUCCESSFULLY TESTED followed by
   RC ORNU *a* SUCCESSFULLY BUFFERED followed by all new entries.

   where *a* = RC Order Number

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat Steps 1 through 8.

9. At the 1B MTC terminal, enter **RCACT:ORNU a!**

   where *a* = RC Order Number

   Response: `RC ORNU a ACTIVATED` followed by all new entries.

   where *a* = RC Order Number

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, remove recent change using RC form 701 and repeat this DLP.

10. At the 1B MTC terminal, enter **VER:UTYPE:TSI x,SME y!**

    where *x* = Member Number (0-62)
    y = TSI Port Index Number (See Table A)

TABLE A TSI Port Index Numbers

PORT	INDEX NO.	PORT	INDEX NO.	PORT	INDEX NO.
SPC 0-0	56	SPC 0-5	61	SPC 1-3	66
SPC 0-1	57	SPC 0-6	62	SPC 1-4	67
SPC 0-2	58	SPC 1-0	63	SPC 1-5	68
SPC 0-3	59	SPC 1-1	64	SPC 1-6	69
SPC 0-4	60	SPC 1-2	65		

Response:
```
VER:UTMN;OPT(SME),CUR:
FLN a
UTYN b
MEMN c
ME d
SME e
SUBMEM f
```

where *a* = Floor location number
b = Unit type name
c = Member number of growth associated complex
d = Member equipage
e = SubMember Equipage (SME)
f = SME index number

Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat this step using correct data.

11. **STOP! YOU HAVE COMPLETED THIS PROCEDURE.**

Verify Service Circuit System (SCS) Unit Type Translator for Growth Service Circuit Units (SCUs) 0-15

Note: If, during this procedure, the value of any of the words in the unit type translator are not what they should be, **DLP-515 can be used to perform a functional word change**. However, remember that, depending on local procedures, supervisory or TELCO engineering approval must be obtained prior to performing any data change.

1. At the 1B Maintenance (MTC) terminal, enter **VER:UTYPE:SCS** *x***!**

   where x = Member Number (0-7)

   Response: The information shown in Figure 1 is displayed.

   Note: The words shown in Figure 1 are in **octal** format.

VER:UTMN;OPT(),CUR: **FLN** *a* **UTYN** *b*

MEMN *c* **ME** *d*
ENTRY ADDRESS *e* **ENTRY SIZE** *f*

CUR					
WORD 0	_____	_____	_____	_____	
	_____	_____	_____	_____	
WORD 10	_____	_____	_____	_____	
	_____	_____	_____	_____	
WORD 20	_____	_____	_____	_____	
	_____	_____	_____	_____	
WORD 30	_____	_____	_____	_____	
	_____	_____	_____	_____	
WORD 40	_____	_____	_____	_____	
	_____	_____	_____	_____	
WORD 50	_____	_____	_____	_____	
	_____	_____	_____	_____	
WORD 60	_____	_____	_____	_____	
	_____	_____	_____	_____	
WORD 70	_____	_____	_____	_____	
	_____	_____	_____	_____	
WORD 100	_____	_____	_____	_____	

***a* = Floor location number**
***b* = Unit type name**
***c* = Member number of growth associated complex**
***d* = Member equipage**
***e* = 8-digit entry address**
***f* = 2-digit entry size**

Figure 1. SCS Unit Type Translator

2. Is the message format and member identification correct as shown in Figure 1?

   If **Yes**, continue with Step 3.
   If **No**, determine and resolve the cause, and repeat from Step 1.

3. Using TTY output and Figure 2 (beginning on page 6), check that the growth SCU(s) submember equipage bits per word 0 and/or 12 are set to **0**.

   If these bits are **set to 0**, continue with Step 4.

   If these bits are **not set to 0**, do one of the following:

   Use RC form 701 to degrow submember equipage to unequipped (see DLP-513 [OPER to SGRO], DLP-535 [SGRO to GROW], and/or DLP-536 [GROW to UNEQ], depending on current equipage).

   or

   Use RC form 801 to perform a functional word change to change the desired bits to 0 (DLP-515).

   Caution: Depending on local procedures, supervisory or TELCO engineering approval must be obtained prior to performing any data change.

4. Using the TTY output and Figure 2 (beginning on page 6), verify the Signal Distributor (SD) assignments for the growth SCU(s) per words 17, 20, 21, and/or 22 as follows:

   1. Convert octal digits of entry output data words to decimal Signal Processor (SP) member, row, and column numbers and record results. If the fourth rightmost octal digit of a word is **2** or **3**, add decimal 64 to the SP row number determined for that word.
   2. Search the **ROW** and **COLUMN** listings in the appropriate office record drawings (PTAGS) and locate the row and column previously recorded for each of the indicated words. If the associated **UNIT TYPE** and **FRM NO** does not agree with the growth frame, record the discrepancy for later use.

5. Using the TTY output and Figure 2 (beginning on page 6), verify the scan point assignments for the growth SCUs per words 13, 14, 15, and/or 16 as follows:

   1. Convert octal digits of entry output data words to decimal SP member, row, and column numbers and record results. If the fourth rightmost octal digit of a word is **2** or **3**, add decimal 64 to the SP row number determined for that word.
   2. Search the **ROW** and **COLUMN** listings in the appropriate office record drawings and locate the row and column previously recorded for each of the indicated words. If the associated **UNIT TYPE** and **FRM NO** does not agree with the growth frame, record the discrepancy for later use.

6. Using the TTY output and Figure 2 (beginning on page 6), verify the Service Circuit Type per the words shown in Table A.

   Note: Prior to this verification, you must know which announcement set is assigned to each growth SCU.

TABLE A Octal Words and Associated SCUs for Service Circuit Type and TSI Port Assignment Determination

SCU	Word	SCU	Word	SCU	Word	SCU	Word
0	24	4	40	8	54	12	70
1	27	5	43	9	57	13	73
2	32	6	46	10	62	14	76
3	35	7	51	11	65	15	101

7. Using the TTY output and Figure 2 (beginning on page 6), verify growth SCU(s) to Time Slot Interchange (TSI) port assignment per the words in Table A.

   1. Convert the octal digits representing TSI information to decimal.
   2. Compare the calculated data for the TSI member number, SPC, and TSI port number to the appropriate office records containing SCU to TSI port assignments, and record any discrepancies.

8. Using the TTY output and Figure 2 (beginning on page 6), verify that growth MSP equipage bits are set to **0** per the words in Table B, and note any discrepancies.

TABLE B Octal Words and Associated SCUs for MSP Equipage Verification

SCU	Word	SCU	Word	SCU	Word	SCU	Word
0	25	4	41	8	55	12	71
1	30	5	44	9	60	13	74
2	33	6	47	10	63	14	77
3	36	7	52	11	66	15	102

9. Using the TTY output and Figure 2 (beginning on page 6), verify that the Disk Pair Equipage bits per the words in Table C are set to **00** for each growth SCU, and note any discrepancies.

TABLE C Octal Words and Associated SCUs for Disk Capacity, Disk Pair Equipage, and LAN Address Verification

SCU	Word	SCU	Word	SCU	Word	SCU	Word
0	26	4	42	8	56	12	72
1	31	5	45	9	61	13	75
2	34	6	50	10	64	14	80
3	37	7	53	11	67	15	103

10. Using the TTY output and Figure 2 (beginning on page 6), verify the LAN address per the words in Table C, and note any discrepancies. The LAN address should be the SCS member number multiplied by 16, plus the SCU number.

11. Using the TTY output and Figure 2 (beginning on page 6), verify that the Disk Capacity bits per the words in Table C match office hardware. The bits for each disk pair should be set to **00** for 422 MB disk pairs (TN1672 circuit packs), **01** for 2 GB disk pairs (TN1972 circuit packs), or **10** for 4 GB disk pairs (TN4000 circuit packs).

    Caution: SCU 0 can physically support 4 disk pairs (0, 1, 2, and 3). When populating disk capacity bits for SCU 0, adhere to the following rules:

    - ***Type 0 (TN1672 circuit packs) can be populated in all 4 disk pair locations.***
    - ***Type 1 (TN1972 circuit packs) can only be populated in 3 of 4 disk pair locations.***
    - ***Type 2 (TN4000 circuit packs) can only be populated as shown in Table D.***

TABLE D Allowable Disk Pair Configurations When Using Type 2 (TN4000) Circuit Packs With SCU 0

Allowable Disk Pair Types			
Location 0	**Location 1**	**Location 2**	**Location 3**
2	X		
2	X	0	
2	X	0	0
2	X	1	
2	X	0	1
2	X	1	0
0	0	2	X
0	1	2	X
1	0	2	X
Where "X" indicates disk pair locations that **must be unpopulated**.			

12. Were any discrepancies found in Steps 4 through 11?

    If **Yes**, continue to Step 13.

    If **No**, continue to Step 16.

13. Was the error found to be in the Unit Type entry data or the office records?

    If **Unit Type entry data**, continue to Step 14.

    If **office records**, continue to Step 16.

14. Assist the installer in taking appropriate corrective action as determined by regional engineering and as approved by office supervisor.

15. Have all Unit Type data errors now been corrected?

    If **Yes**, continue to Step 16.

    If **No**, return to Step 14.

16. **STOP! YOU HAVE COMPLETED THIS PROCEDURE.**

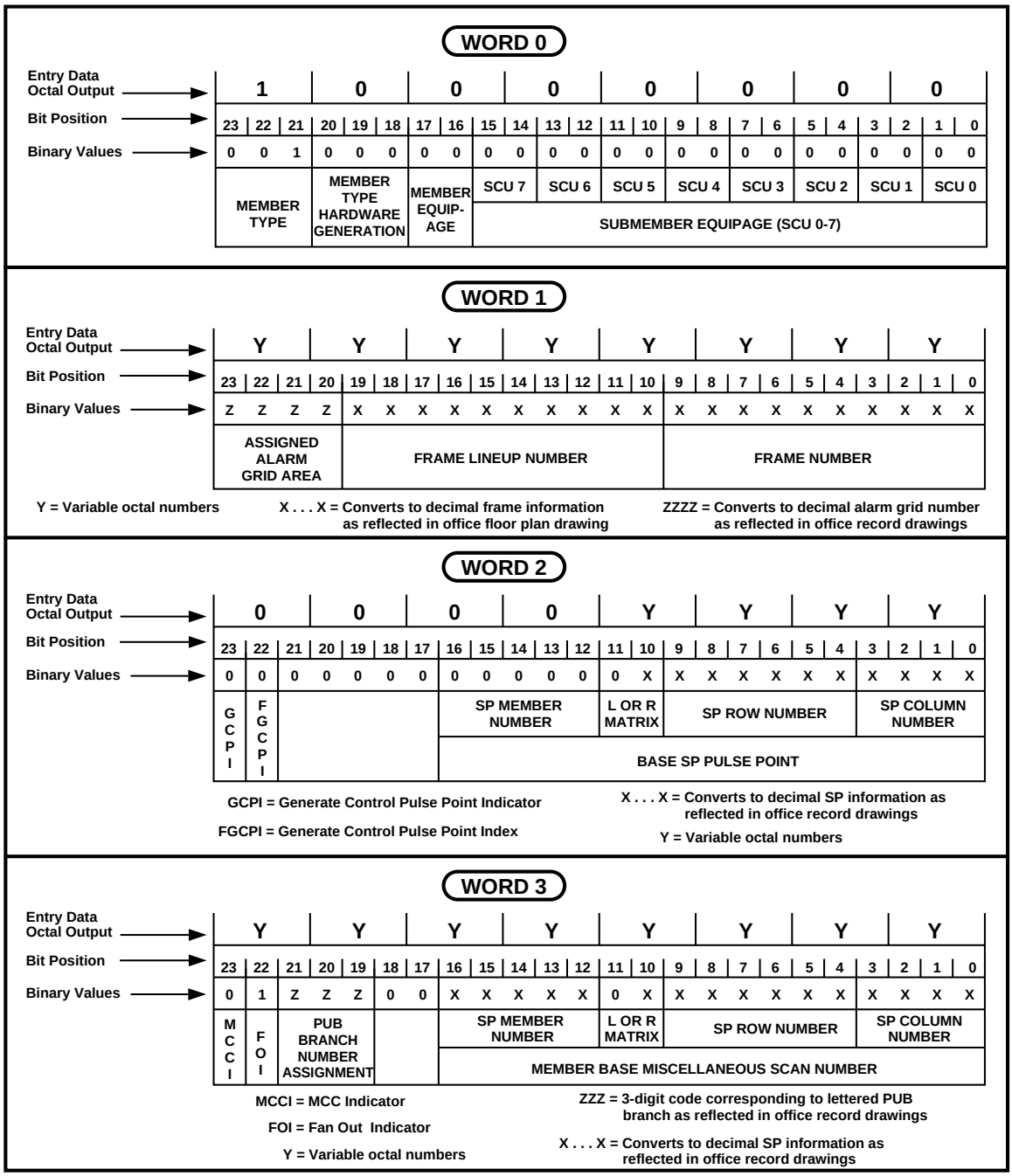

Figure 2. Unit Type Entry Data and Word Configuration (Word Numbers are in Octal)

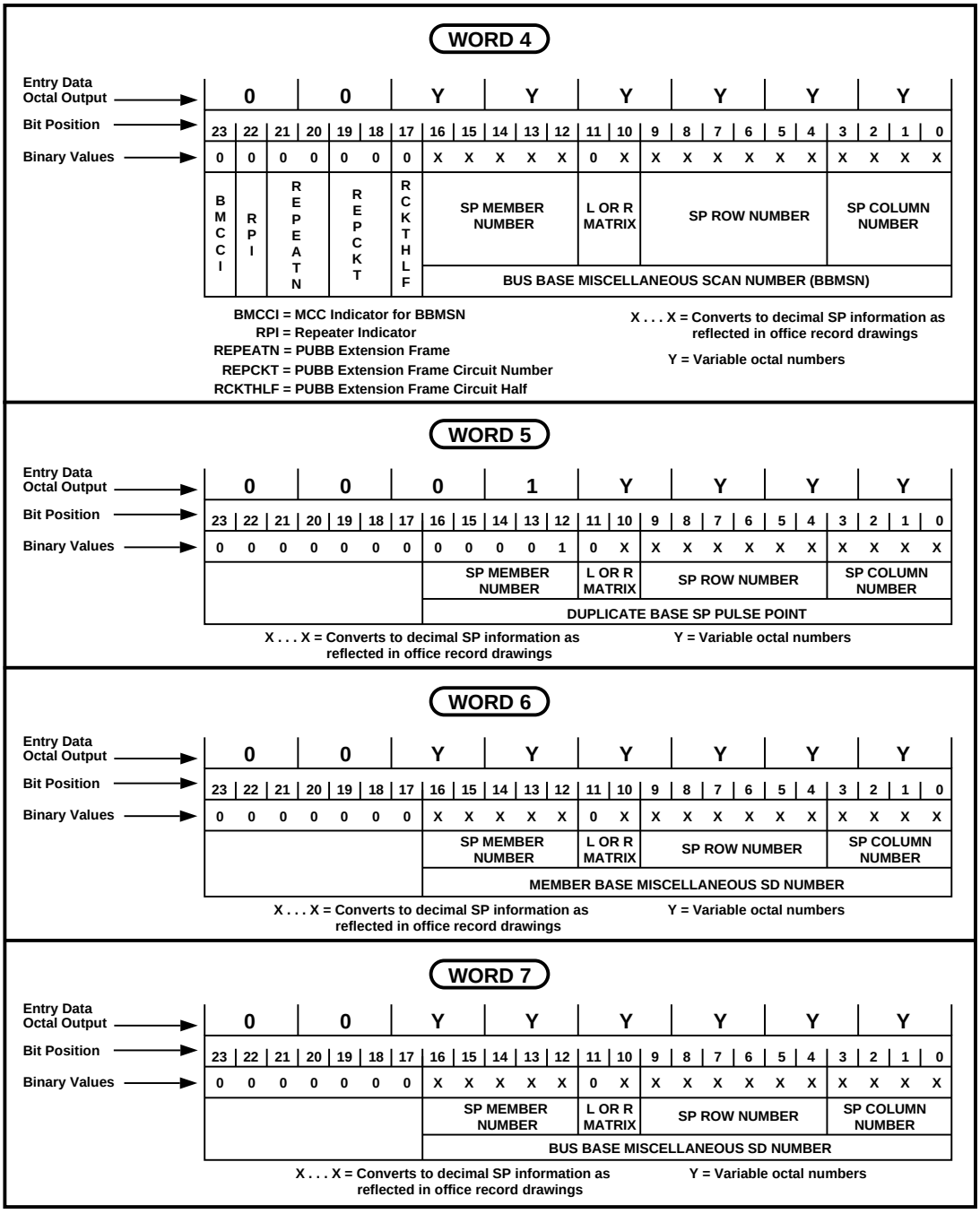

Figure 2. Unit Type Entry Data and Word Configuration (Word Numbers are in Octal) (Contd.)

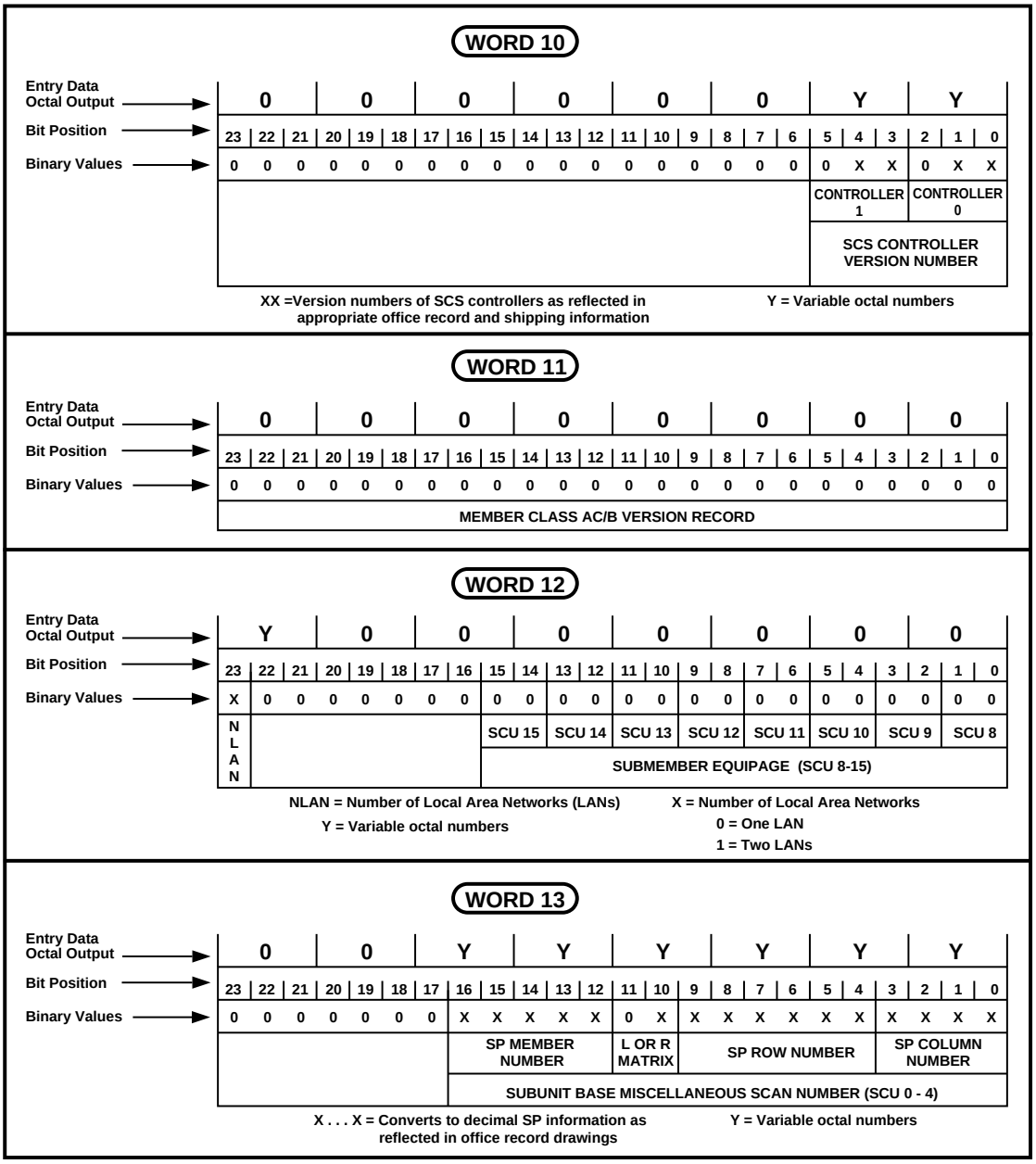

Figure 2. Unit Type Entry Data and Word Configuration (Word Numbers are in Octal) (Contd.)

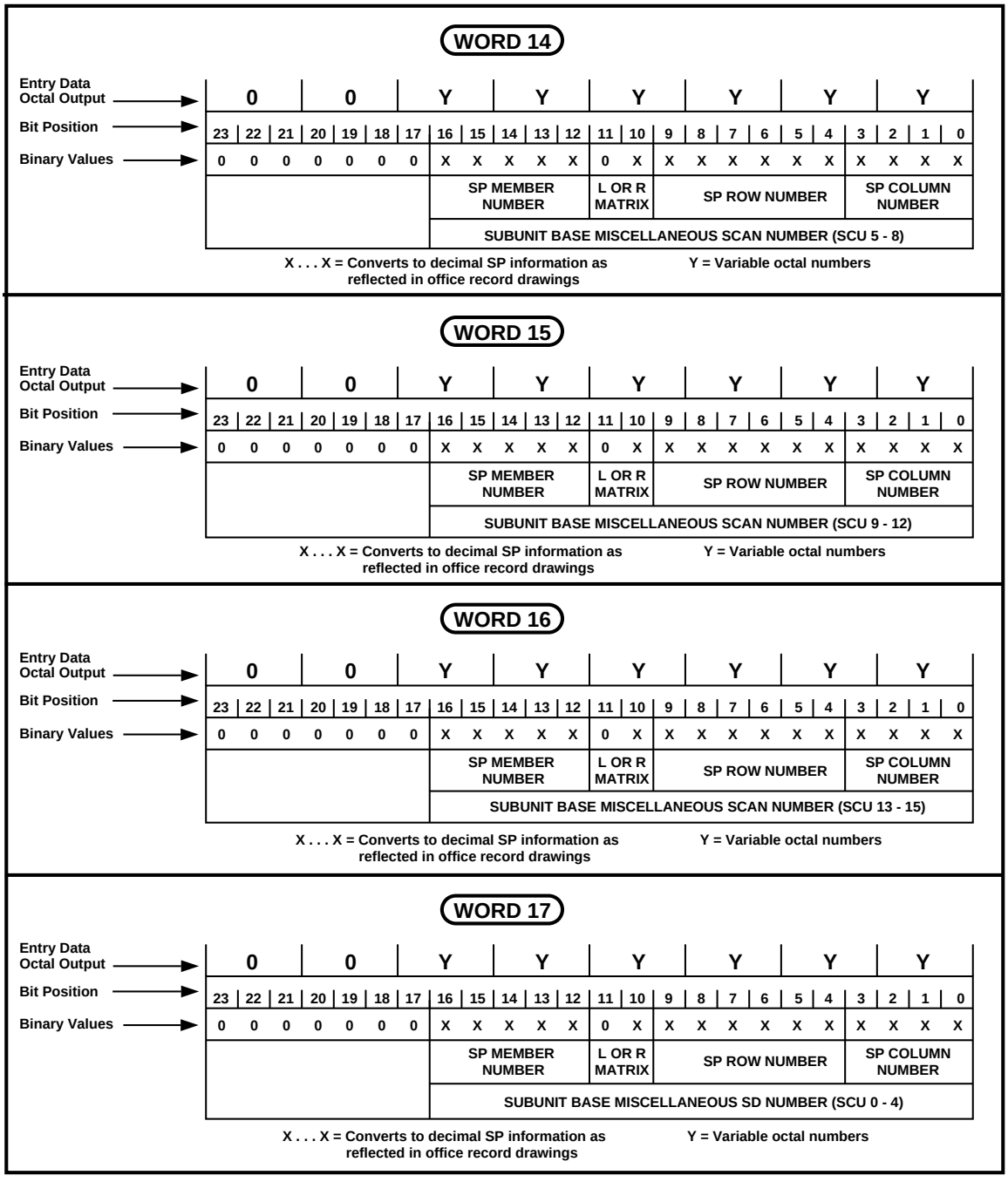

Figure 2. Unit Type Entry Data and Word Configuration (Word Numbers are in Octal) (Contd.)

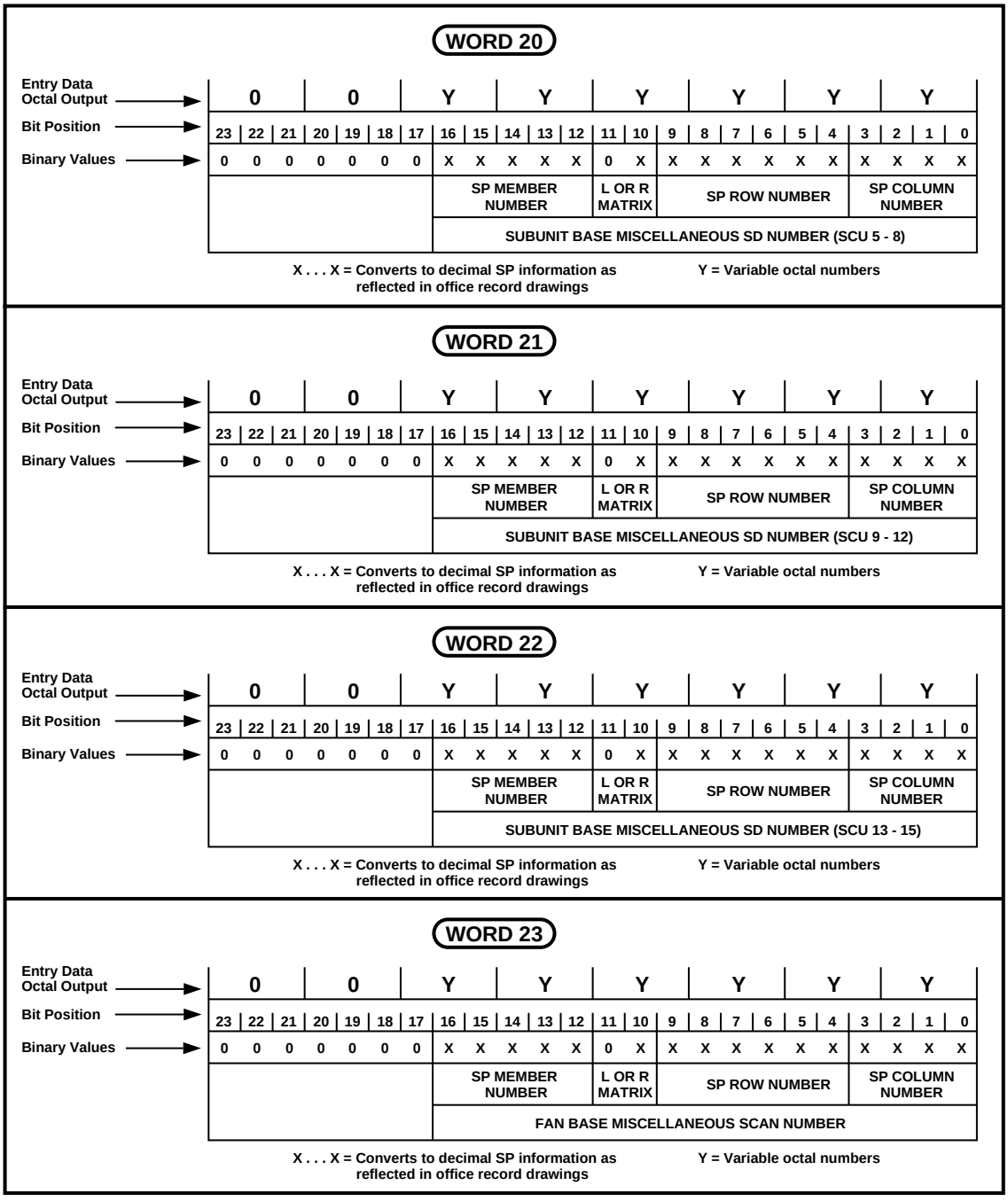

Figure 2. Unit Type Entry Data and Word Configuration (Word Numbers are in Octal) (Contd.)

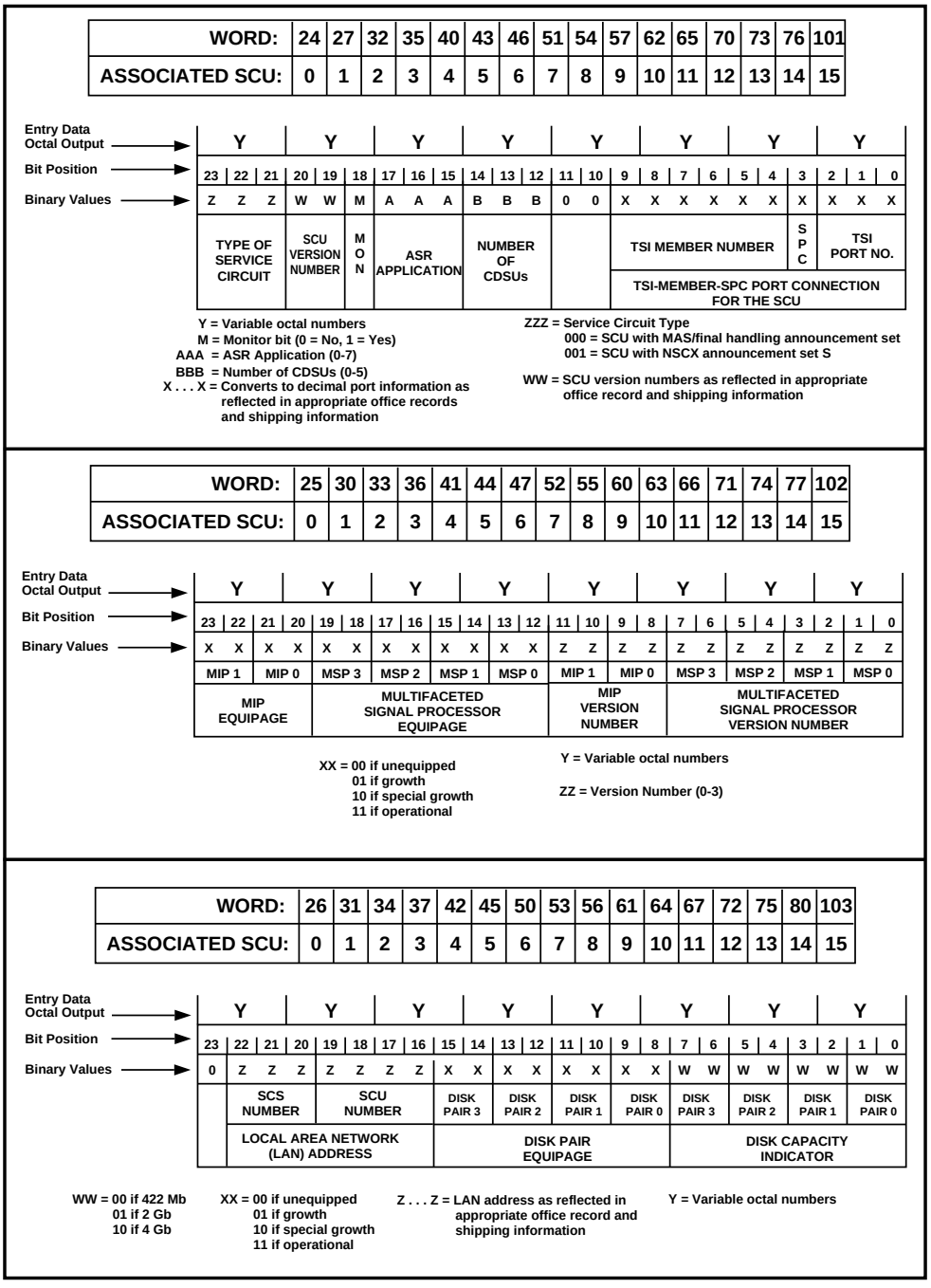

Figure 2. Unit Type Entry Data and Word Configuration (Word Numbers are in Octal) (Contd.)

Recent Change and Verify Submember Equipage From SGRO to GROW Using Recent Change (RC) Form 701 (Degrow)

Caution: Calling up an RC form will cause all data on the screen to be cleared.

1. At the 1B Maintenance (MTC) terminal, enter **OP:RCFORM 701!**

   Response: Recent Change Form 701 appears on the screen.

2. At `UTYN`, enter Unit Type (**SCS**).

3. At `ORNU`, enter a unique Order Number.

4. At `MEMN`, enter the Member Number.

5. At `SUBMEM`, enter the Submember Name (**SCUEQ[0-15]**, where 0-15 is the SCU number).

6. At `SME`, enter **SGRO**, then enter **GROW**.

7. If no `REMARKS` are needed, return the cursor to the top of the form by pressing HOME.

8. Press SEND/ENTER

   Response: `RC ORNU` *a* `SUCCESSFULLY TESTED` followed by
   `RC ORNU` *a* `SUCCESSFULLY BUFFERED` followed by all new entries.

   where *a* = RC Order Number

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat Steps 1 through 8.

9. At the 1B MTC terminal, enter **RCACT:ORNU** *a***!**

   where *a* = RC Order Number

   Response: `RC ORNU` *a* `ACTIVATED` followed by all new entries.

   where *a* = RC Order Number

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, remove recent change using RC form 700 and repeat this DLP.

10. At the 1B MTC terminal, enter **VER:UTYPE:SCS** *x***,SME** *y***!**

    where *x* = Member Number (0-7)
    y = SCU Index Number (See Table A)

TABLE A SCU Index Numbers

SCU	INDEX NO.	SCU	INDEX NO.	SCU	INDEX NO.	SCU	INDEX NO.
0	177	4	181	8	185	12	189
1	178	5	182	9	186	13	190
2	179	6	183	10	187	14	191
3	180	7	184	11	188	15	192

Response:

`VER:UTMN;OPT(SME),CUR:` `FLN` *a* `UTYN` *b*

`MEMN` *c* `ME` *d*

`SUBMEM` *e*, `SME` *f*

where *a* = Floor location number
b = Unit type name
c = Member number of growth associated complex
d = Member equipage
e = SCU index number
f = Submember equipage

Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat this step using correct data.

11. **STOP! YOU HAVE COMPLETED THIS PROCEDURE.**

Recent Change and Verify Submember Equipage From GROW to UNEQ Using Recent Change (RC) Form 701 (Degrow)

Caution: Calling up an RC form will cause all data on the screen to be cleared.

1. At the 1B Maintenance (MTC) terminal, enter **OP:RCFORM 701!**

   Response: Recent Change Form 701 appears on the screen.

2. At UTYN, enter Unit Type (**SCS**).

3. At ORNU, enter a unique Order Number.

4. At MEMN, enter the Member Number.

5. At SUBMEM, enter the Submember Name (**SCUEQ[0-15]**, where 0-15 is the SCU number).

6. At SME, enter **GROW**, then enter **UNEQ**.

7. If no REMARKS are needed, return the cursor to the top of the form by pressing HOME.

8. Press SEND/ENTER

   Response: RC ORNU *a* SUCCESSFULLY TESTED followed by
   RC ORNU *a* SUCCESSFULLY BUFFERED followed by all new entries.

   where *a* = RC Order Number

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat Steps 1 through 8.

9. At the 1B MTC terminal, enter **RCACT:ORNU** *a***!**

   where *a* = RC Order Number

   Response: `RC ORNU` *a* `ACTIVATED` followed by all new entries.

   where *a* = RC Order Number

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, remove recent change using RC form 700 and repeat this DLP.

10. At the 1B MTC terminal, enter **VER:UTYPE:SCS** *x*,**SME** *y*!

    where *x* = Member Number (0-7)
    y = SCU Index Number (See Table A)

TABLE A SCU Index Numbers

SCU	INDEX NO.	SCU	INDEX NO.	SCU	INDEX NO.	SCU	INDEX NO.
0	177	4	181	8	185	12	189
1	178	5	182	9	186	13	190
2	179	6	183	10	187	14	191
3	180	7	184	11	188	15	192

Response:

`VER:UTMN;OPT(SME),CUR:` `FLN` *a* `UTYN` *b*

`MEMN` *c* `ME` *d*

`SUBMEM` *e*, `SME` *f*

where *a* = Floor location number
b = Unit type name
c = Member number of growth associated complex
d = Member equipage
e = SCU index number
f = Submember equipage

Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat this step using correct data.

11. **STOP! YOU HAVE COMPLETED THIS PROCEDURE.**

Recent Change and Verify Member Equipage From SGRO to GROW Using Recent Change Form 701 (Degrow)

Caution: Calling up an RC form will cause all data on the screen to be cleared.

1. At the 1B Maintenance (MTC) terminal, enter **OP:RCFORM 701!**

   Response: Recent Change Form 701 appears on the screen.

2. At UTYN, enter Unit Type (**SCS**).

3. At ORNU, enter a unique Order Number.

4. At MEMN, enter the Member Number.

5. At ME, enter **SGRO**, then enter **GROW**.

6. If no REMARKS are needed, return the cursor to the top of the form by pressing HOME.

7. Press SEND/ENTER

   Response: RC ORNU *a* SUCCESSFULLY TESTED followed by
   RC ORNU *a* SUCCESSFULLY BUFFERED followed by all new entries.

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat Steps 1 through 7.

8. At the 1B MTC terminal, enter **RCACT:ORNU** *a***!**

   where *a* = RC Order Number

   Response: `RC ORNU` *a* `ACTIVATED` followed by all new entries.

   where *a* = RC Order Number

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, remove recent change using RC form 700 and repeat this DLP.

9. At the 1B MTC terminal, enter **VER:UTYPE:SCS** *x***!**

   where *x* = Member Number (0-7)

   Response:
   ```
   VER:UTMN;OPT(),CUR:
   FLN a
   UTYN b
   MEMN c
   ME d
   ENTRY ADDRESS e
   ENTRY SIZE f
   ```

   The above responses are followed by a complete printout of the SCS unit type entry data. (Use this printout to determine if data was properly entered.)

   where *a* = Floor location number
   b = Unit type name
   c = Member number of growth associated complex
   d = Member equipage
   e = An 8-digit entry address
   f = A 2-digit entry size

10. **STOP! YOU HAVE COMPLETED THIS PROCEDURE.**

Recent Change and Verify Member Equipage From GROW to UNEQ Using Recent Change Form 701 (Degrow)

Caution: Calling up an RC form will cause all data on the screen to be cleared.

1. At the 1B Maintenance (MTC) terminal, enter **OP:RCFORM 701!**

   Response: Recent Change Form 701 appears on the screen.

2. At UTYN, enter Unit Type (**SCS**).

3. At ORNU, enter a unique Order Number.

4. At MEMN, enter the Member Number.

5. At ME, enter **GROW**, then enter **UNEQ**.

6. If no REMARKS are needed, return the cursor to the top of the form by pressing HOME.

7. Press SEND/ENTER

   Response: RC ORNU *a* SUCCESSFULLY TESTED followed by
   RC ORNU *a* SUCCESSFULLY BUFFERED followed by all new entries.

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat Steps 1 through 7.

8. At the 1B MTC terminal, enter **RCACT:ORNU** *a***!**

   where *a* = RC Order Number

   Response: `RC ORNU` *a* `ACTIVATED` followed by all new entries.

   where *a* = RC Order Number

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, remove recent change using RC form 700 and repeat this DLP.

9. At the 1B MTC terminal, enter **VER:UTYPE:SCS** *x***!**

   where *x* = Member Number (0-7)

   Response:
   ```
   VER:UTMN;OPT(),CUR:
   FLN a
   UTYN b
   MEMN c
   ME d
   ENTRY ADDRESS e
   ENTRY SIZE f
   ```

   The above responses are followed by a complete printout of the SCS unit type entry data. (Use this printout to determine if data was properly entered.)

   where *a* = Floor location number
   b = Unit type name
   c = Member number of growth associated complex
   d = Member equipage
   e = An 8-digit entry address
   f = A 2-digit entry size

10. **STOP! YOU HAVE COMPLETED THIS PROCEDURE.**

Recent Change and Verify Connecting Breakage Time Slot Interchange (TSI) Submember Equipage From OPER to SGRO Using Recent Change (RC) Form 701 (Degrow)

Caution: Calling up an RC form will cause all data on the screen to be cleared.

1. At the 1B Maintenance (MTC) terminal, enter **OP:RCFORM 701!**

   Response: Recent Change Form 701 appears on the screen.

2. At UTYN, enter **TSI**.

3. At ORNU, enter a unique Order Number.

4. At MEMN, enter the Member Number.

5. At SUBMEM, enter the Submember Name (**T0PRTEQ[0-6]** for SPC0 ports 0-6, or **T1PRTEQ[0-6]** for SPC1 ports 0-6).

6. At SME, enter **OPER** under OLD, then enter **SGRO** under NEW.

7. If no REMARKS are needed, return the cursor to the top of the form by pressing HOME.

8. Press SEND/ ENTER

   Response: RC ORNU *a* SUCCESSFULLY TESTED followed by
   RC ORNU *a* SUCCESSFULLY BUFFERED followed by all new entries.

   where *a* = RC Order Number

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat Steps 1 through 8.

9. At the 1B MTC terminal, enter **RCACT:ORNU** *a***!**

   where *a* = RC Order Number

   Response: `RC ORNU` *a* `ACTIVATED` followed by all new entries.

   where *a* = RC Order Number

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, remove recent change using RC form 700 and repeat this DLP.

10. At the 1B MTC terminal, enter **VER:UTYPE:TSI** *x*,**SME** *y*!

    where *x* = Member Number (0-62)
    y = TSI Port Index Number (See Table A)

TABLE A TSI Port Index Numbers

PORT	INDEX NO.	PORT	INDEX NO.	PORT	INDEX NO.
SPC 0-0	56	SPC 0-5	61	SPC 1-3	66
SPC 0-1	57	SPC 0-6	62	SPC 1-4	67
SPC 0-2	58	SPC 1-0	63	SPC 1-5	68
SPC 0-3	59	SPC 1-1	64	SPC 1-6	69
SPC 0-4	60	SPC 1-2	65		

Response:

```
VER:UTMN;OPT(SME),CUR:        FLN a              UTYN b

MEMN c          ME d

SUBMEM e,      SME f
```

where *a* = Floor location number
b = Unit type name
c = Member number of growth associated complex
d = Member equipage
e = TSI index number
f = Submember equipage

Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat this DLP using correct data.

11. **STOP! YOU HAVE COMPLETED THIS PROCEDURE.**

Recent Change and Verify Connecting Breakage Time Slot Interchange (TSI) Submember Equipage From SGRO to GROW Using Recent Change (RC) Form 701 (Degrow)

Caution: Calling up an RC form will cause all data on the screen to be cleared.

1. At the 1B Maintenance (MTC) terminal, enter **OP:RCFORM 701!**

   Response: Recent Change Form 701 appears on the screen.

2. At UTYN, enter **TSI**.

3. At ORNU, enter a unique Order Number.

4. At MEMN, enter the Member Number.

5. At SUBMEM, enter the Submember Name (**T0PRTEQ[0-6]** for SPC0 ports 0-6, or **T1PRTEQ[0-6]** for SPC1 ports 0-6).

6. At SME, enter **SGRO** under OLD, then enter **GROW** under NEW.

7. If no REMARKS are needed, return the cursor to the top of the form by pressing HOME.

8. Press SEND/ ENTER

   Response: RC ORNU *a* SUCCESSFULLY TESTED followed by
   RC ORNU *a* SUCCESSFULLY BUFFERED followed by all new entries.

   where *a* = RC Order Number

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat Steps 1 through 8.

9. At the 1B MTC terminal, enter **RCACT:ORNU** *a***!**

   where *a* = RC Order Number

   Response: `RC ORNU` *a* `ACTIVATED` followed by all new entries.

   where *a* = RC Order Number

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, remove recent change using RC form 700 and repeat this DLP.

10. At the 1B MTC terminal, enter **VER:UTYPE:TSI** *x*,**SME** *y*!

    where *x* = Member Number (0-62)
    y = TSI Port Index Number (See Table A)

TABLE A TSI Port Index Numbers

PORT	INDEX NO.	PORT	INDEX NO.	PORT	INDEX NO.
SPC 0-0	56	SPC 0-5	61	SPC 1-3	66
SPC 0-1	57	SPC 0-6	62	SPC 1-4	67
SPC 0-2	58	SPC 1-0	63	SPC 1-5	68
SPC 0-3	59	SPC 1-1	64	SPC 1-6	69
SPC 0-4	60	SPC 1-2	65		

Response:

`VER:UTMN;OPT(SME),CUR:` `FLN` *a* `UTYN` *b*

`MEMN` *c* `ME` *d*

`SUBMEM` *e*, `SME` *f*

where *a* = Floor location number
b = Unit type name
c = Member number of growth associated complex
d = Member equipage
e = TSI index number
f = Submember equipage

Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat this DLP using correct data.

11. **STOP! YOU HAVE COMPLETED THIS PROCEDURE.**

Recent Change and Verify Connecting Breakage Time Slot Interchange (TSI) Submember Equipage From GROW to UNEQ Using Recent Change (RC) Form 701 (Degrow)

Caution: Calling up an RC form will cause all data on the screen to be cleared.

1. At the 1B Maintenance (MTC) terminal, enter **OP:RCFORM 701!**

   Response: Recent Change Form 701 appears on the screen.

2. At UTYN, enter **TSI**.

3. At ORNU, enter a unique Order Number.

4. At MEMN, enter the Member Number.

5. At SUBMEM, enter the Submember Name (**T0PRTEQ[0-6]** for SPC0 ports 0-6, or **T1PRTEQ[0-6]** for SPC1 ports 0-6).

6. At SME, enter **GROW** under OLD, then enter **UNEQ** under NEW.

7. If no REMARKS are needed, return the cursor to the top of the form by pressing HOME.

8. Press SEND/ENTER

   Response: RC ORNU *a* SUCCESSFULLY TESTED followed by
   RC ORNU *a* SUCCESSFULLY BUFFERED followed by all new entries.

   where *a* = RC Order Number

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat Steps 1 through 8.

9. At the 1B MTC terminal, enter **RCACT:ORNU** *a***!**

   where a = RC Order Number

   Response: `RC ORNU` *a* `ACTIVATED` followed by all new entries.

   where *a* = RC Order Number

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, remove recent change using RC form 700 and repeat this DLP.

10. At the 1B MTC terminal, enter **VER:UTYPE:TSI** *x*,**SME** *y*!

    where *x* = Member Number (0-62)
    y = TSI Port Index Number (See Table A)

TABLE A TSI Port Index Numbers

PORT	INDEX NO.	PORT	INDEX NO.	PORT	INDEX NO.
SPC 0-0	56	SPC 0-5	61	SPC 1-3	66
SPC 0-1	57	SPC 0-6	62	SPC 1-4	67
SPC 0-2	58	SPC 1-0	63	SPC 1-5	68
SPC 0-3	59	SPC 1-1	64	SPC 1-6	69
SPC 0-4	60	SPC 1-2	65		

Response:

```
VER:UTMN;OPT(SME),CUR:          FLN a                UTYN b

MEMN c           ME d

SUBMEM e,       SME f
```

where *a* = Floor location number
b = Unit type name
c = Member number of growth associated complex
d = Member equipage
e = TSI index number
f = Submember equipage

Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat this DLP using correct data.

11. **STOP! YOU HAVE COMPLETED THIS PROCEDURE.**

Verify Unit Type Translator to Determine Time Slot Interchange (TSI) Information, Multifaceted Signal Processor (MSP) Equipage, and Disk Pair Equipage

1. At the 1B Maintenance (MTC) terminal, enter **VER:UTYPE:SCS** *x***!**

   where x = Member Number (0-7)

   Response: The information shown in Figure 1 is displayed.

   Save this printout. It will be used to determine TSI port information, disk pair equipage, and MSP equipage for each applicable SCU.

   Note: The words shown in Figure 1 are in **octal** format.

VER:UTMN;OPT(),CUR: **FLN** *a* **UTYN** *b*

MEMN *c* **ME** *d*
ENTRY ADDRESS *e* **ENTRY SIZE** *f*

CUR				
WORD 0	_____	_____	_____	_____
	_____	_____	_____	_____
WORD 10	_____	_____	_____	_____
	_____	_____	_____	_____
WORD 20	_____	_____	_____	_____
	_____	_____	_____	_____
WORD 30	_____	_____	_____	_____
	_____	_____	_____	_____
WORD 40	_____	_____	_____	_____
	_____	_____	_____	_____
WORD 50	_____	_____	_____	_____
	_____	_____	_____	_____
WORD 60	_____	_____	_____	_____
	_____	_____	_____	_____
WORD 70	_____	_____	_____	_____
	_____	_____	_____	_____
WORD 100	_____	_____	_____	_____

a **= Floor location number**
b **= Unit type name**
c **= Member number of growth associated complex**
d **= Member equipage**
e **= 8-digit entry address**
f **= 2-digit entry size**

Figure 1. SCS Unit Type Translator

2. Is the message format and member identification correct as shown in Figure 1?

   If **Yes**, continue with Step 3.
   If **No**, determine and resolve the cause, and repeat from Step 1.

3. Using the TTY output and Figure 2, determine the values for each of the items listed in Table A for each applicable SCU. Record these values in the appropriate columns of Table A for future reference.

4. **STOP! YOU HAVE COMPLETED THIS PROCEDURE.**

TABLE A SCU Information

SCU NO.	MSP EQUIPAGE				DISK PAIR EQUIPAGE				TSI MEMBER NUMBER	SPC NUMBER	LEVEL NO. (TSI PORT NUMBER)
	3	2	1	0	3	2	1	0			
0											
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											

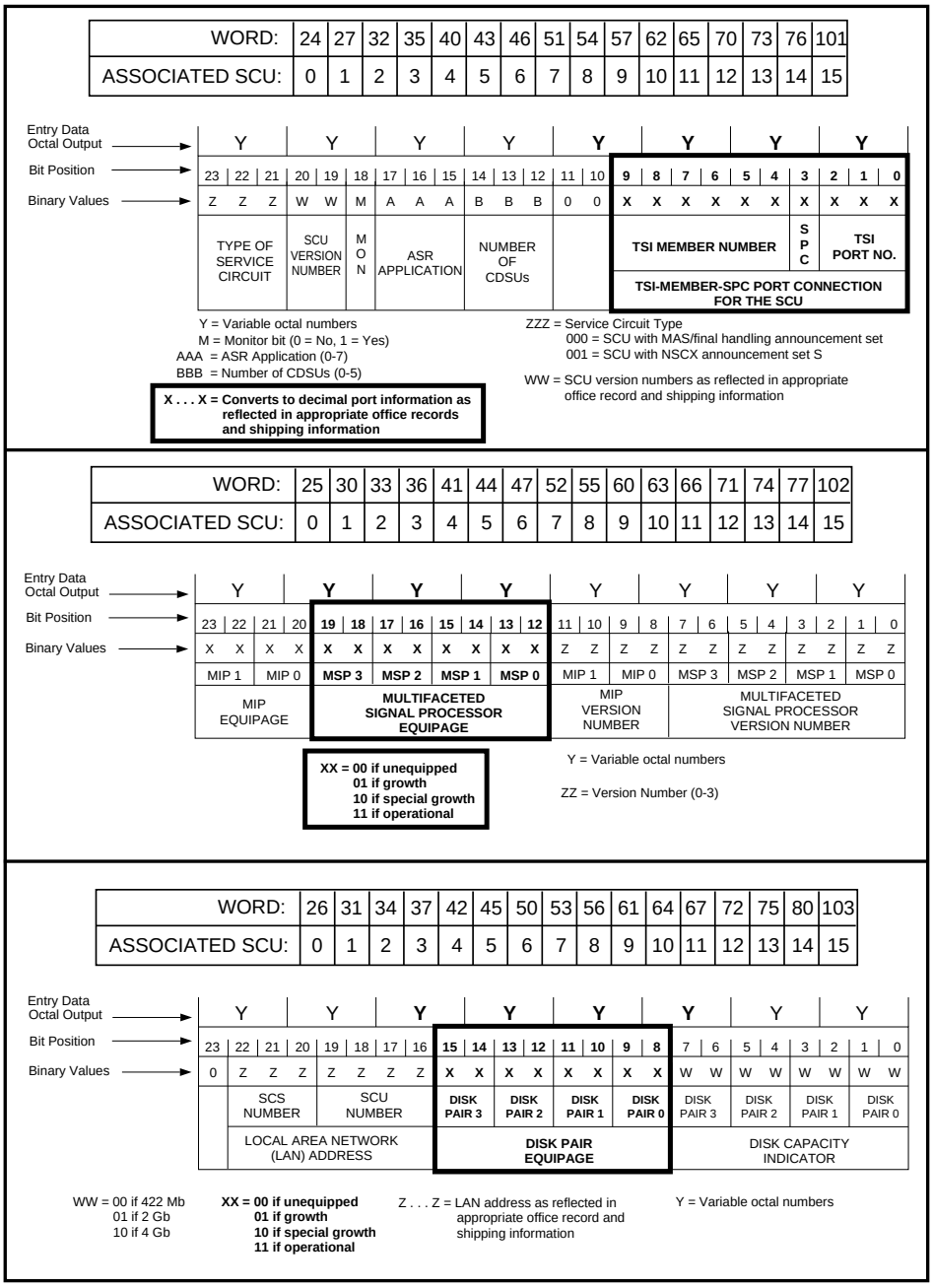

Figure 2. Words Used to Determine TSI Information, MSP Equipage, and Disk Pair Equipage

Turn On ASM-Plus Feature Using Recent Change Form 800

Caution: Calling up a Recent Change (RC) form will cause all data on the screen to be cleared.

1. At the Secondary Records (SREC) terminal, enter **OP:RCFORM 800!**

   Response: Recent Change Form 800 appears on the screen.

2. At `RC:FUNC;CHG;OPT(ABSOLUTE)`, enter **TST**.

3. At `FSONLY`, enter **N**.

4. At `ADDRESS`, enter **7521101** (4E18) or **7001162** (4E19).

5. At `ORNU`, enter a unique Order Number assigned to this word change.

6. At `WORDNO`, enter **0**.

7. At `SIZE`, enter **2**.

8. At `DISP`, enter **6**.

9. At `BINOCT`, enter **B**.

10. At `NEWDATA`, enter **11**.

11. At `OLDDATA`, enter **00**.

12. If no `REMARKS` are needed, return the cursor to the top of the form by pressing HOME.

13. Press SEND/ENTER

    Response: `RC ORNU` *a* `SUCCESSFULLY TESTED` followed by
    `RC ORNU` *a* `SUCCESSFULLY BUFFERED` followed by all new entries.

    where *a* = RC Order Number

    Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat Steps 1 through 13.

14. At the SREC terminal, enter **RCACT:ORNU** ***a*****!**

    where *a* = RC Order Number

    Response: `RC ORNU` *a* `ACTIVATED` followed by all new entries.

    where *a* = RC Order Number

15. **STOP! YOU HAVE COMPLETED THIS PROCEDURE.**

Update SCU/MSP Version Numbers in the Service Circuit System (SCS) Translator Using Recent Change (RC) Form 703

Caution: Calling up a Recent Change (RC) form will cause all data on the screen to be cleared.

1. At the 1B Maintenance (MTC) terminal, enter **OP:RCFORM 703!**

   Response: Recent Change Form 703 appears on the screen.

2. At SCS, enter the SCS Member Number (0-7) of the growth SCS complex.

3. At SCU, enter the appropriate SCU Number (0-15).

4. At ORNU, enter a unique Order Number.

5. At SCUFV, enter the new version number for the SCU (the version number that was recorded in the "Version Number" column of Table A in DLP-545 for the file "SCUOPR").

6. At MSBFV, locations 0-5, enter the new version number for the MSP (the version number that was recorded in the "Version Number" column of Table A in DLP-545 for the file "MSPFIX").

   Note: The "0" location for MSBFV will always be populated. Depending on your system configuration, no update may be needed for the remaining five locations.

7. If no REMARKS are needed, press HOME to return the cursor to the top of the form.

8. Press SEND/ENTER

   Response: `RC ORNU` *a* `SUCCESSFULLY TESTED` followed by
   `RC ORNU` *a* `SUCCESSFULLY BUFFERED` followed by all new entries.

   where *a* = RC Order Number

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat Steps 1 through 8.

9. At the 1B MTC terminal, enter **RCACT:ORNU** ***a*****!**

   where *a* = RC Order Number

   Response: `RC ORNU` *a* `ACTIVATED` followed by all new entries.

   where *a* = RC Order Number

   Note: All entries should be checked for accuracy. If any entries are found to be incorrect, repeat this step correcting the errors.

10. At the 1B MTC terminal, enter **VER:UTYPE:SCS x!**

    where *x* = Member Number (0-7)

    Response:
    ```
    VER:UTMN;OPT(),CUR:
    FLN a
    UTYN b
    MEMN c
    ME d
    ENTRY ADDRESS e
    ENTRY SIZE f
    ```

    where *a* = Floor location number
    b = Unit type name
    c = Member number of growth associated complex
    d = Member equipage
    e = An 8-digit entry address
    f = A 2-digit entry size

    The above responses are followed by a complete printout of the SCS unit type entry data. Use this printout and Figure 1 to determine if the SCU data (SCU and MSP version numbers) was properly entered.

11. **STOP! YOU HAVE COMPLETED THIS PROCEDURE.**

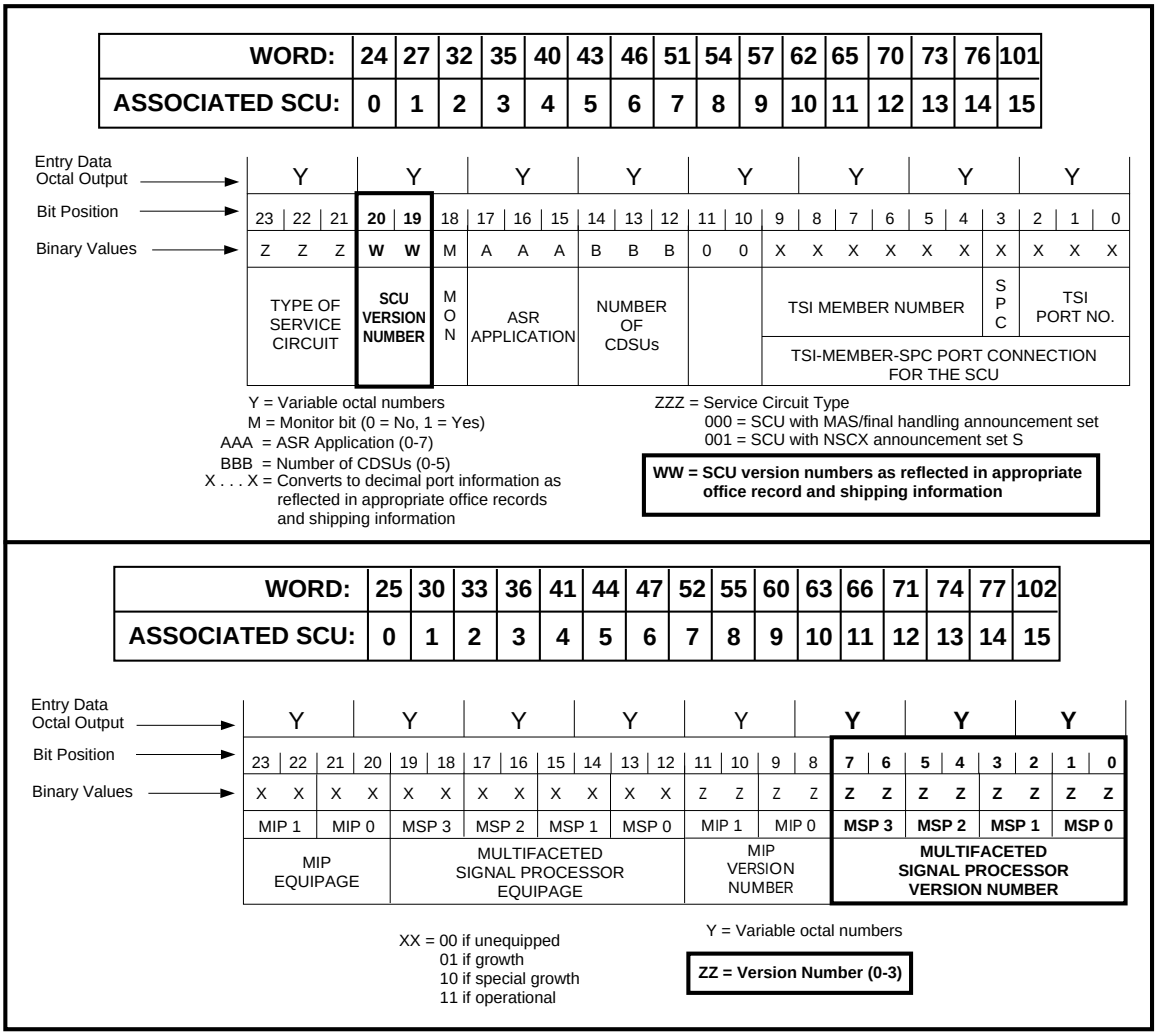

Figure 1. Words in SCS Unit Type Translator Used to Determine SCU and MSP Version Numbers

Verify the Latest SCS System Version Numbers From Translations for In-Service Disk Pairs

1. At the 1B Maintenance (MTC) terminal, enter **VER:UTYPE:SCS** *x***!**

   where *x* = Member Number (0-7) of in-service SCS.

   Response: The information shown in Figure 1 is displayed and printed.

   Note: The words shown in Figure 1 are in **octal** format.

VER:UTMN;OPT(),CUR: **FLN** *a* **UTYN** *b*

MEMN *c* **ME** *d*
ENTRY ADDRESS *e* **ENTRY SIZE** *f*

CUR

WORD 0	_____ _____	_____ _____	_____ _____	_____ _____
WORD 10	_____ _____	_____ _____	_____ _____	_____ _____
WORD 20	_____ _____	_____ _____	_____ _____	_____ _____
WORD 30	_____ _____	_____ _____	_____ _____	_____ _____
WORD 40	_____ _____	_____ _____	_____ _____	_____ _____
WORD 50	_____ _____	_____ _____	_____ _____	_____ _____
WORD 60	_____ _____	_____ _____	_____ _____	_____ _____
WORD 70	_____ _____	_____ _____	_____ _____	_____ _____
WORD 100	_____	_____	_____	_____

***a* = Floor location number**
***b* = Unit type name**
***c* = Member number of growth associated complex**
***d* = Member equipage**
***e* = 8-digit entry address**
***f* = 2-digit entry size**

Figure 1. SCS Unit Type Translator

2. Using the printout from Step 1 and Figure 2 (page 3), determine the version number for Controllers 0 and 1 by looking at bits 0 through 5 in octal word 10. The version number should be the same for both controllers, and can range from 0 to 3. Record this version number in Table A as the version number for SCS system file type **SCCSFT**.

TABLE A SCS System File Types and Associated Version Numbers for Existing Hardware

SCS System File Type	Version Number
SCCSFT	
SCUOPR	
SCUDGN	
MSPFIX	
MSPROV	
TONES	0

Note: The version number for the **TONES** file type **is always 0**, and is already entered in Table A.

3. Using the printout from Step 1 and the middle section of Figure 2 (page 3), determine the version number for **existing** SCUs by looking at bits 19 and 20 of the applicable words.

   Record this version number in Table A as the version number for SCS system file types, **SCUOPR** and **SCUDGN**. (The version number should be the same for all existing SCUs and can range from 0 to 3.)

4. Using the printout from Step 1 and the bottom section of Figure 2 (page 3), determine the version number for Multifaceted Signal Processor (MSP) 0 per bits 0 and 1 of the applicable words.

   Record this version number in Table A as the version number for SCS system file types, **MSPFIX** and **MSPROV**. (This version number should be the same for all existing SCUs and can range from 0 to 3.)

5. **STOP! YOU HAVE COMPLETED THIS PROCEDURE.**

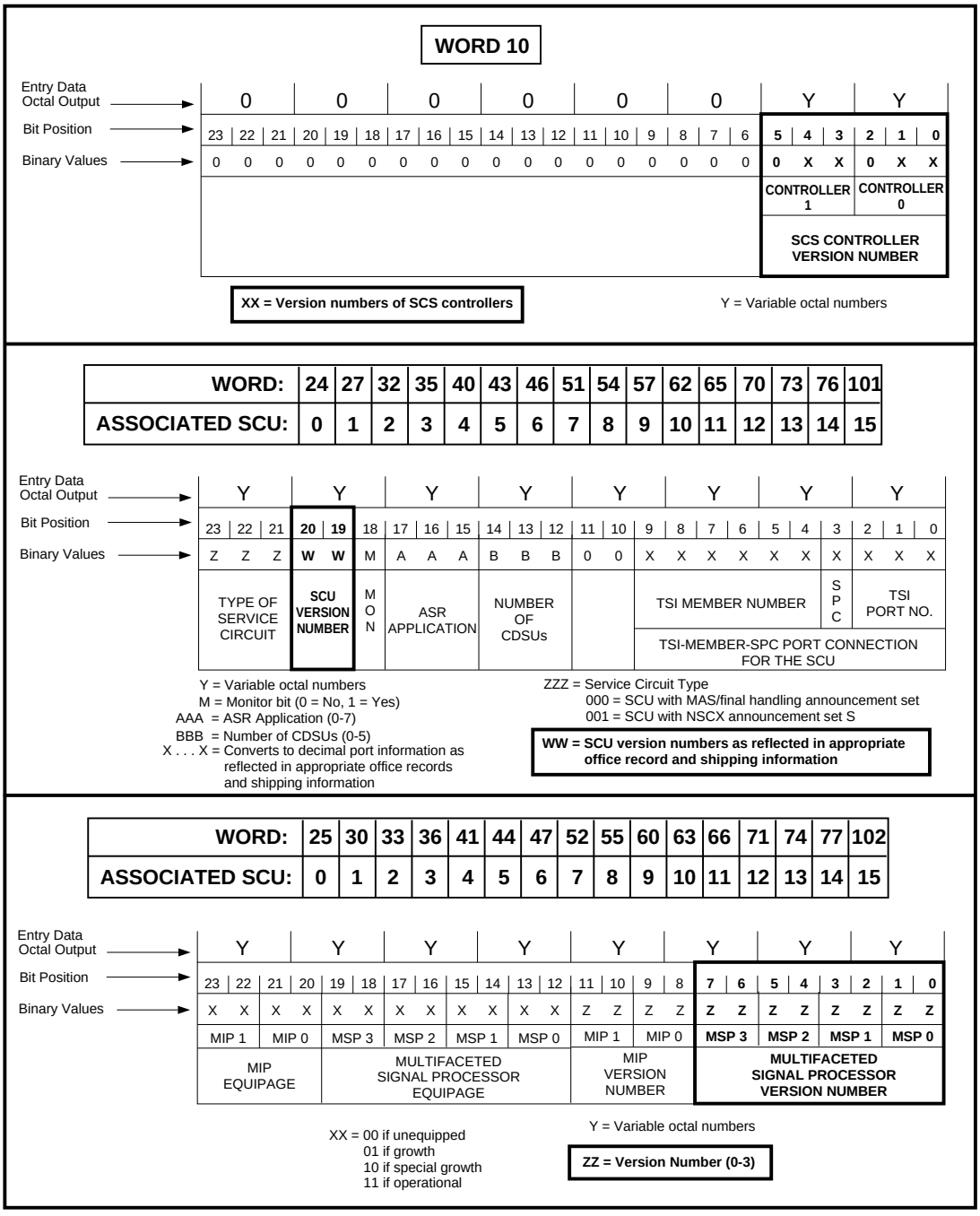

Figure 2. Words in SCS Unit Type Translator Used to Determine Version Numbers

HOW TO USE THIS DOCUMENT

This document gives you all the step-by-step instructions you need to do your job (task). These instructions are given in the order that they *must* be done. Failure to follow the instructions in the order given may cause service interruptions.

This document is divided into parts called procedures. Each procedure is given a 3-digit number. These numbers range from 001 through 893. Procedures are arranged in this document in numerical order beginning with 001.

Figure 1 is a typical IXL-001 procedure and is titled *Task Index List*. It is an alphabetical listing of the jobs that you may have to do. To use an IXL-001 procedure, just find the job you need to do in the FIND YOUR JOB IN THE LIST BELOW column. Next, follow the dotted line to the procedure number and begin the task. For example, suppose you are given the job of doing a system test. On the IXL-001 procedure, as shown in Figure 1, notice that it is listed in the THEN GO TO column as NTP-016. It could have been any other 3-digit number.

Figure 2 is an example of an NTP (Non-Trouble Procedure). Each NTP provides specific instructions for doing a job. It consists of numbered items (or steps) listed in the order that you must do them to complete your job. To use this procedure, you must start with item 1 in the DO THE ITEMS BELOW IN ORDER LISTED column and continue until all items have been done. When you get to an item that you do not know how to do, look for the procedure number for that item under the FOR DETAILS, GO TO column. This is the number of the procedure that will give you detailed, step-by-step instructions to do that item. Note that item 2 in Figure 2 uses lettered (A, B) entries. This means that there are alternate ways of doing item 2 depending on equipment options or equipment conditions. You do only the one that fits your equipment options or equipment conditions.

For example, suppose you are doing a System Test. The IXL-001 as shown in Figure 1, has directed you to NTP-016 as shown in Figure 2, and you are on item 8 ‘‘Mount Tape’’ in the DO ITEMS BELOW IN ORDER LISTED column. Mount the tape if you know how. If you do not know how to mount the tape, go to the procedure number listed in the FOR DETAILS, GO TO column for the detailed, step-by-step instructions. In this case, it happens to be DLP-500. In either case, you must continue with the next item listed in NTP-016 until you complete the job.

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TASK INDEX LIST

FIND YOUR JOB IN THE LIST BELOW	THEN GO TO
Alert; External - Horn, Ringer, Etc. - Remove	NTP-028
Amplifiers; Channel - Recorded Announcement Frame - Test	NTP-009
BRDG LED - Does Not Light - Correct	TAP-117
Bridging Controller; Trunk - J1C015MB - Replace	DLP-572
Channel Amplifiers - Recorded Announcement Frame - Test	NTP-009
Extended Station Capability - Nonkey Set Only - Reported Failure	TAP-123
External Alert - Horn, Ringer, Etc. - Remove	NTP-028
Interchange Two Working Station Numbers	NTP-081
LED: BRDG - Does Not Light - Correct	TAP-117
Loudspeaker Paging - Add	NTP-059
New International Trunk, R1 Signaling - Incoming - Establish	NTP-010
New Tandem Trunk - T-Carrier and Digroup Terminal - Establish	NTP-008
Station Capability; Extended - Nonkey Set Only - Reported Failure	TAP-123
System Test - Perform	NTP-016
Trunk Bridging Controller - J1C015MB - Replace	DLP-572

Figure 1. Typical List of Jobs You May Have to Do

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PERFORM SYSTEM TEST

DO THE ITEMS BELOW IN ORDER LISTED	FOR DETAILS, GO TO
1 Test Local Maintenance Terminal	DLP-531
2 Place SEC/SEB in Off-Line Mode	
A. If in On-Line Mode, Change System From On-Line to Off-Line	DLP-509
B. If Powered Down, Condition System for Off-Line Operation as Follows	
1. Power up Minicomputer	DLP-503
2. Power up Line Printer	DLP-503
3. Power up Maintenance Terminal	DLP-510
. . .	
. . .	
. . .	
. . .	
. . .	
. . .	
7 Run Computer Display Terminal Test For All Positions	DLP-513
8 Mount Tape	DLP-500
9 Test Computer Display	DLP-522

Figure 2. Typical List of Specific Instructions for Doing a Job

Figure 3 is a typical page of a DLP-500 (Detailed Level Procedure - 500) that gives numbered, step-by-step instructions. To use this procedure, you must start with Step 1 and proceed as directed by the instructions until you complete this procedure. Note that Step 1 of this procedure is preceded by a statement called a SUMMARY. A summary is used as a memory jogger, and briefly tells you how to do the procedure and what measurements or results you can observe. If you can do the procedure after reading the SUMMARY, go ahead and do it without reading any further.

Now, look at Step 6 of DLP-500 as shown in Figure 3. Note that following the action statement there is the sentence, For help see DLP-563. When you see a statement like this, it means that additional step-by-step instructions for doing just that step are given in the referenced procedure. In this case, DLP-563 gives you the details on how to ensure that the write-enable ring is not installed on the file reel. If you, in this case, cannot do Step 6, then go to DLP-563. In either case, you must continue with Step 7 until you have completed the procedure. In some cases, you may be directed to a procedure where the procedure number is preceded by the letters TAP (Trouble Analysis Procedure); for example, TAP-109. This means that you have trouble in the equipment, and in this case TAP-109 will give you step-by-step instructions to fix the trouble. After you have fixed the trouble, you must return to Step 1 of the procedure that sent you to TAP-109. However, if you came directly from IXL-001 to TAP-109, then your job is completed when you have fixed the trouble.

Admonishments: Three admonishments are used in this document as follows:

DANGER: This means there is a possibility of personal injury.

Caution: This means there is a possibility of service interruption.

WARNING: This means there is a possibility of equipment damage.

Important Items: Table A lists the more important items used in this document.

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MOUNT TAPE

SUMMARY: Install tape with or without write enable ring, as required. Thread tape and position tape at BOT (Beginning Of Tape) marker.

1. Get file reel and empty take-up reel.
2. Set **START/STOP** switch to **STOP**.
3. Set **ON LINE/OFF LINE** switch to **OFF LINE.**
4. Set **LOAD/BR REL** switch to center position.
5. Is data to be written on tape?
   If **yes**, then install write enable ring on file reel and go to Step **7**.
   If **no**, then do Step **6**.
6. Ensure that write enable ring is not installed on file reel. For help see DLP-563.
7. Open tape transport door.

Figure 3. Typical List of Detailed Instructions for Doing a Job

TABLE A Important Procedural Items and Definitions

Item	Definition
Acceptance (NTP-002)	Provides information and identifies jobs to be done to accept equipment after it is installed.
Maintenance Philosophy	The maintenance philosophy, when provided, gives an overview of the considerations designed into the trouble-clearing procedures.
DLP (Detailed Level Procedure)	Detailed, step-by-step instructions.
TAP (Trouble Analysis Procedure)	Step-by-step, trouble-clearing instructions to locate and/or fix troubles.
NTP (Non-Trouble-Clearing Procedure)	A list of items to perform normal work other than trouble-clearing.